

ARCHIVES OF SURGERY.

OCTOBER, 1891.

A CASE OF RUPTURE OF THE DUODENUM, IN WHICH THE SYMPTOMS WERE OBSCURE AND THE PATIENT LIVED TWO WEEKS.

THE diagnosis in cases of contusions of the abdomen is acknowledged by all to be often a matter of extreme difficulty. In the case which I am about to narrate, although certain symptoms were very conspicuous, yet their correct interpretation was not easy. Throughout its course much difference of opinion was felt as to the nature and severity of the lesion. The difficulty may be indicated by the fact that two days before the patient's death he himself, his friends, and those who had seen most of his case thought him recovered sufficiently well to take a journey to his own home. Yet the autopsy proved that he had been suffering all the time from the most extensive peritonitis, and that it was not improbable that his bowel had been ruptured at the time of the accident. I will, in the first instance, place the case before the reader in the form of a Schedule-statement, as being the one most easily realized.

CASE-SCHEDULE.—*Severe Contusion of Abdomen—Immediate profuse sweating, followed by collapse—Symptoms of Peritonitis, with much sickness and dry mouth—An attack of symmetrical transitory Parotitis—Survival for a fortnight. Autopsy: Rupture of Duodenum, and universal Peritonitis.*

DAY OF ILLNESS.	DAY OF WEEK.	DETAILS.
1	Wednesday	A football accident in the afternoon. Two hours afterwards eyes sunk and aspect like that of a cholera patient.
2	Thursday	He had rallied, and was thought to be better.
3	Friday	I saw him for first time. Suggested diagnosis—Injury to liver with extravasation of blood and peritonitis. Temperatures normal.
4	Saturday	My second visit. Swelling of left parotid began. Temp. 100, pulse 100.
5	Sunday	Left parotid much swollen; right beginning. Whole mouth absolutely dry. Although no fluids were taken, he passed urine freely. Skin absolutely dry. Temp. 101.
6	Monday	Allowed a little fluid. He was very wishful to drink. Both parotids much swollen. Taches cérébrales well marked. Bowels acted sparingly.
7	Tuesday	He looks better, but still has dusky, flushed cheeks as if in fever. Tongue, and mouth generally, quite dry. Left parotid subsiding; right very large.
8	Wednesday	We began to allow a little food. A little sickness at times with green vomit. Abdomen not only not distended but decidedly sunken.
9	Thursday	Again vomiting of green stuff. Temp. normal.
10	Friday	Improving, but still very restless. Temp. normal.
11	Saturday	Bowels freely open, and better in all respects.
12	Sunday	Improving.
13	Monday	Supposed to be much better; taking food, and no sickness.
14	Tuesday	A consultation as to whether he might be removed home. We decided not to allow him to be moved.
15	Wednesday	Worse; more feeble. He had still no distension of abdomen, and took his food fairly well. In the afternoon became much worse.
16	Thursday	He died in collapse.

The autopsy showed a rupture of the anterior part of duodenum, with ragged edges. There was general peritonitis with extensive adhesions, but no proof of extravasation of fæces or air. Much bile staining, as if bile had been freely poured into the peritoneal cavity.

The interest of this case is not by any means exhausted in a statement of the difficulties which throughout its course attended the diagnosis. It presented a series of marked symptoms, which offer to the student of physiology under the disturbing influences of disease very important problems. A most inordinate action of the sweat glands was the immediate result of the shock, the latter having occurred, it is to be observed, while the lad was heated by exercise. His woollen clothing was in the course of a few minutes "soaked in perspiration, as if he had been taken out of water." After this the action of these glands ceased, and throughout his illness not the slightest trace of sensible perspiration ever occurred. Yet the dryness of skin was not accompanied by high temperatures. This arrest of skin-function was attended by a like condition in the mouth. The tongue and cheeks became quite dry, and remained so, constituting a condition of what may be called acute xerostomia. With this dryness of skin and mucous membranes we had to note what appeared to be an excessive secretion by the kidneys. During several days, whilst all taking of fluids by the mouth was forbidden, the quantity of urine passed was the astonishment of the patient and his attendants. Lastly, we have the occurrence of an acute, but transitory, attack of symmetrical parotitis, in all respects resembling one of ordinary mumps.

It is to be noted respecting this engorgement of the parotids that it was by no means merely passive. It was inflammatory, and attended by tenderness and rise of temperature. It involved all parts of the glands, and fixed the lower jaw just as occurs in mumps. In explanation of the dryness of the mouth, the conjecture may be hazarded that the continued action of the kidneys when no water was supplied to the blood, may have so drained it as to leave nothing for the salivary glands to secrete. Probably, however, there was something more than this. At the time that the dry mouth first showed itself fluids were being taken freely.

CASE-NARRATIVE.

Mr. W——, aged 21, received in a football game a very severe blow in the abdomen from the knee of a competitor. He

was "doubled up," and suffered extreme pain. Very soon afterwards he burst into a most profuse sweat, which soaked his clothing. The bystanders aver that it was an ordinary hot sweat and not a cold one. He was taken to a friend's house (six miles) in a cab, and when on arrival he came under medical observation for the first time he was doubled forwards, apparently in great pain, and had a bluish face with livid lips and blue hands. He looked so ill that he was at once carried up to bed. Very soon after this his tongue and mouth became quite dry, and they remained so ever afterwards. Morphia in third-of-grain doses had been given, and possibly the dry mouth was due to this. During the night he had paroxysms of severe pain, and the morphia was repeated.

Before the accident he had once had an attack of perityphilitis, and since an attack of influenza, which occurred in the spring, he had not been so strong as formerly.

I saw Mr. W—— forty-eight hours after the accident. He had been continuously sick and looked very ill, having a pale sunken aspect. He had passed urine freely. His abdomen was rather hard and a little full, but not distended. His breathing was wholly thoracic, and although there was no great tenderness, he preferred to lie on his back with the knees drawn up. His temperature was normal. I suspected that his liver had been injured, and put him on a starvation plan, forbidding absolutely all food and fluid, whether by the mouth or the rectum.

On the following day his sickness had ceased, but in other respects there was no change. His tongue was as dry as possible, and the mouth generally was sticky. Now began swelling of the parotids, and with it his temperature, which had hitherto been normal, went up to 100, and his pulse also increased. He was very restless at times, and slept but little. We now noticed that his skin, which had been always dry and hot, displayed with great ease the phenomenon of *taches cérébrales*. Wherever it was touched, a dull red blotch or streak appeared in the course of a few minutes. His cheeks were like those of fever, being of dull red, whilst his nose, forehead, and eyelids were pale (brick-dust colour of cheeks). He was always most anxious to have his hands cooled. All night he

would keep ice in his hands, or put them in iced water. It seemed to relieve his sense of heat.

I did not allow any food or drink until Monday, the sixth day. Up to this time, after the second day, he had been allowed only to moisten his mouth by teaspoonfuls at a time, or by sucking little fragments of ice and spitting out the water. He had had repeatedly full doses of opium in the form of suppository. He had several times expressed his astonishment that whilst drinking nothing he yet continued to pass urine freely. He was very thirsty. There had been no vomiting since the refusal of fluids.

During the next week, from Tuesday, Nov. 18th, to Tuesday the 25th, I did not see Mr. W——. He was considered on the whole to be progressing well. All trace of the mumps disappeared, and he was able to take food in small quantities with some relish. The dryness of his mouth, however, continued to be almost absolute. On one or two occasions vomiting returned, and he ejected a small quantity of green bile. His bowels acted spontaneously, and all trace of abdominal fulness had entirely disappeared. On Tuesday, Nov. 25th, I was asked to see him again in order to decide whether he were well enough to be removed to his home in the country. His pulse was now 76; his temperatures had been continuously normal for a week, and he was taking food moderately well. His abdomen was not in the least full, and he permitted us to handle it without complaining of pain. He still, however, had an anxious expression of countenance, and dusky, sunken cheeks. The whole of his mouth was still quite dry, and his skin also was dry and harsh. He was himself anxious to be taken home, and thought that he was getting well. It had been arranged that he should be taken in an ambulance from door to door in the easiest possible manner. Although it was difficult to say what one feared would happen from such a removal, I yet felt no hesitation in advising that it should not be attempted. Although both pulse and temperatures were good, yet the patient himself looked ill. He was still liable to occasional attacks of pain. There was nothing for him to gain by the removal, and it was possible that he might lose much. It was decided, therefore, to wait another week.

On the evening of the following day I was sent for to see him, in consequence of a sudden and severe relapse. He had had much pain in the abdomen, his temperatures had again gone up to 101°, and his pulse to 120. Nothing of the nature of a rigor had been observed, but his feet had been very cold. When I visited him his pulse was "running," and at least 120. His countenance was much more sunken, and the abdomen was fuller and firmer. His respiration was rapid, and, as it had been throughout the illness, wholly thoracic. He was evidently about to sink.

Death in collapse, with cold extremities, &c., occurred during the following night. The autopsy was made next day. When the abdomen was opened a condition of universal peritonitis was disclosed. The intestines were everywhere matted together with lymph, much of it sufficiently firm to suggest that it had been present from near the beginning of the case. There was also a considerable quantity of fluid, which was bile-stained, but did not exhale a faecal odour. There was no gas in the peritoneum, nor was anything recognized as the remains of food which had been taken. There was no laceration of the liver, nor could any injury be detected in the coils of the small intestine. At length, however, on tearing through adhesions, and displacing the viscera in front of the duodenum, a large cavity was opened which contained a creamy, greenish-yellow fluid, evidently with a large admixture of bile, and communicating with this was a lacerated rupture in the front of the gut itself. This laceration had ragged edges, which looked sloughy, and it was large enough to admit the end of the finger.

The conditions described made it highly probable, though perhaps not quite certain, that the duodenum had been ruptured in the first instance, and that the case had been throughout one chiefly of effusion of bile into the peritoneum. This effusion may possibly not have occurred in the beginning, or but to a very slight extent. The contents of the cavity which surrounded the injured gut were different from those of the rest of the peritoneal sac, and contained much more bile. Very probably the extravasated fluids had from an early period been partially shut in by adhesions. The conjecture seemed not

improbable that the final rather sudden collapse had been by a rupture of adhesions and extension of the peritonitis.

It is, of course, necessary, in the light of the facts disclosed at the post-mortem, to review the measures of treatment which were adopted. The propriety of opening the abdomen had, naturally, been more than once discussed in our consultations. This was, however, during the first few days of the illness; for from the seventh day I was not asked to see the patient, and he was believed to be steadily recovering. The symptoms appeared to me, at my first visit, to point to rupture of the liver and extravasation of blood, rather than to injury of the intestine, and this view seemed to be borne out by the progress. With this diagnosis I certainly thought that his chance of recovery was as good without operation as with it. The opinion held by some, that traumatic peritonitis always ends fatally, is a great mistake. I have seen patients recover more than once in whom the symptoms were much more urgent than those displayed in this case. Of such let the case recorded at p. 14, Vol. II. of ARCHIVES stand as an example. In it, after a bullet wound of the abdomen I dissuaded from operation because I thought that the patient would die on the table. It was not done, and he recovered; nor do I in the present instance, although the case has ended in death, see any reason to regret that an exploration was not made. Everything would have depended upon the satisfactory closure of the wound in the duodenum, and this, considering the position of that bowel and the nature of the laceration, must have been a matter of the utmost difficulty and uncertainty.* Nor must it be forgotten that an operation might very possibly have torn away adhesions which had formed, and which might have constituted the patient's one hope of safety. I repeat, that cases of peritonitis from wounds of the abdomen are not in themselves hopeless, and that exploratory operations are not in themselves without risk of adding to the danger. The few-and-far-between cases in which patients have recovered after

* If the reader will remember the position of the duodenum, its depth, concealment by overlapping viscera, and fixity, he will realize the special difficulties which would have attended any attempt to close a wound in it.

such operations are highly creditable to the skill of the surgeons who conducted them. They are not, however, to be taken as conclusive as to the line of treatment which ought to be adopted in cases of doubt. They are too often regarded as cases in which surgery saved life, the numerous instances in which death has followed them being held to have been examples of what was inevitable. But it is not quite so. Amongst the fatal cases after operation there are, I doubt not, a certain proportion which would have recovered if they had been let alone. Were it possible to divide into two groups all the cases of traumatic peritonitis in which well-skilled and judicious surgeons have seriously discussed the propriety of exploring the abdomen by incision, I do not hesitate to believe that we should find amongst those in which that procedure was from one or other reason declined, a far larger proportion of recoveries than in the other. Natural processes are more efficient in bringing about reparation than some modern authorities would have us to believe.

In reference to the proposal of operation in such a case as the above there occurs the further question as to the time most suitable. Clearly I think that the earlier the better if done at all, and in this instance the only time at all appropriate was when I first saw the patient: this was on the third day after the injury. On all subsequent days, until we come to the last, he seemed to be improving, and by no means beyond hope of recovery. From the description given me of the state of collapse when he was first examined, I should judge that it was so great as to have made any exploration inadvisable. The next day might have been more suitable. We must remember, however, that it is by no means easy to decide how great an amount of collapse may be fairly attributed to abdominal shock from contusion. We are accustomed, and probably with reason, to believe that blows on the abdomen, unattended by any visceral lesion, are often productive of severe and alarming collapse.

ON SOME EXCEPTIONAL FORMS OF PHAGEDÆNA IN CONNECTION WITH PRIMARY SYPHILIS.

THE occurrence of phagedænic action in connection with syphilitic sores is one of the most formidable complications with which the surgeon has to deal. When it attacks a primary sore, in an early stage, it usually destroys all specific features and not unfrequently throws doubt on the diagnosis. Under such circumstances much hesitation may be felt as to whether internal treatment should be abstained from or vigorously pushed. The decision is of the utmost consequence to the patient, for upon it may depend, not only prolonged and severe suffering, but the loss of an important organ. In a general way we may consider phagedænic conditions as a form of inflammatory action which seldom lasts long, being easily amenable to treatment. The use of iodoform, a free application of nitric acid, or at the worst a few days in a continuous bath, are measures which usually suffice to arrest the morbid process, and the case becomes one of ordinary syphilis. I have during recent years, however, had under care several cases which seem worthy of record, because they were not easily amenable to treatment, and because they developed peculiarities, in the formation of satellite sores, and as regards the secondary stage.

CASE I.—*A remarkable case of phagedænic ulcer of the eyelid, probably primary—Satellite ulcers on the cheek and scalp—Resistance to treatment—Final cure after a year's use of specifics.*

The case of Mr. G—— was a very extraordinary one. I possess an excellent portrait, which shows very accurately the unusual appearances which the sores on his face

assumed. He was brought to me in February, 1886, with an ulcer on his left lower eyelid, about which there was some question as to whether it might not be malignant. It had been very carefully examined, and the evidence in reference to syphilis had been minutely investigated. It had also received a good deal of treatment on the syphilitic hypothesis, although there was not any clear evidence that he had ever suffered from that disease. The sore when I first saw him involved the outer half of the lower lid, the border of which had been completely destroyed. It had a pultaceous secretion concealing its surface, and its edge was irregular, as if gnawed. It was distinctly in a condition of slow phagedæna, and presented a very ugly appearance. Below this ulcer and on the middle of the cheek were two detached areas of inflammation, each about as large as a shilling and looking almost like miniature carbuncles. On his scalp, which was bald, there was a sore of similar character to those on his cheek, but much smaller. He had no eruption on the body, nor any enlargement of the glands. It will be noticed that all four sores were on the same side of his face and head. I was told by Dr. — that the sore on the eyelid had resisted the most vigorous treatment, and that the potassa fusa had on one occasion been applied to it, without success.* He had also been vigorously mercurialised, and in

* The appended letter had preceded my patient, and it supplies some additional particulars:—

DEAR MR. HUTCHINSON,—To-morrow my friend Dr. R—— will bring his patient, Mr. G——, to see you. Mr. G—— is a bachelor, a very temperate and moral man, but nevertheless one who, if he had got into “trouble,” would have told us about it. About three months ago he had what Dr. R—— thought was one of the usual eyelid tumours. He proposed to remove it, when it inflamed, suppurated, and burst. From this has arisen the present sore. After vainly trying to heal it, Dr. R—— and his patient consulted Mr. E. B——, and afterwards myself. The rodent ulcer, which so commonly affects the lower lid, has none of the features displayed by this. The query is as to whether it is venereal? Now the patient lives with his brother, who is married. This brother not long ago caught syphilis, and is now undergoing the usual course. His wife poulticed the patient's eye and attended to him. Did she convey any infection from her husband, or is the patient's statement as to his purity all nonsense? He seems a truthful man, and has nothing to fear by telling the truth.

B—— thought the sore venereal, and I came to the same conclusion, assisted by the presence of a neighbouring sore and by a certain reddish, ill-defined rash

spite of these measures it had continued to spread. Borax and bichloride of mercury, opium and other applications, had also been tried in vain. For a short time iodoform ointment had been used, but only of the strength of five grains to the ounce.

The sore on the eyelid had begun about three months before I saw Mr. G——, and was at first supposed to be only a sty. It ulcerated, however, and then continued gradually to spread. There was a history of possible infection of the eyelid, for the wife of a gentleman who was suffering from syphilis had dressed the eye and applied poultices to it. I could not feel the slightest doubt that the sore was, in some form, a specific one, and I thought that it was probably primary. Whether it was an infecting chancre or not was, however, open to question. It had caused no enlargement of glands. It was not at all indurated, and it had resisted the influence of mercury. No secondary symptoms had resulted, although it had been present between two and three months. It was possible, however, that these had been prevented by the use of mercury. On the theory of its being a soft sore, it was a little remarkable that it had resisted the potassa fusa and the iodoform ointment. The latter, however, had not been persevered with long. Our patient was a gentleman of about 48, of dark complexion, but in good health. He was in a state of great distress and anxiety, believing that the whole of his eyelid would be destroyed.

We determined, in consultation, to try the effect of local treatment only, and commenced the use of iodoform, in powder and ointment at the same time. The powder was to be first freely dusted into the sore, and then an ointment,

about his head. With these exceptions he has no other sign of syphilis. He has been pretty vigorously mercurialised, and Dr. R—— will tell you of his treatment. About three weeks ago, disgusted with the slow progress of the thing, we gave him ether, and I thoroughly burnt the sore with potassa fusa, in the hope of quite destroying its character, whatever that may be. This has not succeeded. The sore is not so deep nor so hard, but has spread.

R—— will supply all the details to this sketch, and we will be glad of your counsel and aid.

Yours very truly,

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containing one drachm to the ounce, was to be applied over it. If this plan did not succeed, the sore was to be freely touched with the acid nitrate of mercury.

Some improvement was manifest during the first week, but it was but little. At the end of ten days, although very desirous to continue the experiment of local treatment only, I felt bound, in duty to my patient, to give him the possible advantage of specifics, and prescribed the bichloride of mercury with a small dose of iodide. I also recommended that he should go to the seaside to carry out the treatment. He accordingly went to Folkestone. From this date it must be considered that our therapeutic measures were mixed.

A fortnight later I was inclined to think that an eruption on the thighs denoted constitutional syphilis, and I recommended Mr. G—— to commence the inunction of mercury in addition to the other measures. It will be seen that we had now had the experience of a month's sea-air and of the liberal use of iodoform. I now ordered a drachm of the mercurial ointment to be rubbed over the abdomen and chest every night. This was in the first week of April, and I did not see him again for a fortnight.

Mr. G—— came to me again on Tuesday, April 27th. He had suffered a good deal of back-ache, and fancied that the mercury had caused it. He was in very low spirits, believing that his sores would never heal, and suffering much from pain in them. The rash on the scalp and the dusky lichenoid spots on his thighs had distinctly faded; but it could not be said that there was any improvement whatever in the condition of the sores on his face. At the edge of the larger one on the eyelid a little black fragment of gangrenous skin showed that the phagedænic process was still present, and without mitigation. The sore had, indeed, slightly spread in most directions, and it was still covered with glutinous secretion. It was exceedingly tender to the touch. The three satellite sores had all, during the last few weeks, slowly but steadily increased. The one over the malar bone was depressed in the middle, but that on the cheek was distinctly raised and had much the aspect of a small carbuncle just beginning to soften. There was no evidence of

mercurial influence on the mouth, and I advised him to continue the inunction regularly. It was impossible to feel sure that the spots on his thighs were of a specific nature. They were little dusky lichenoid papules and were neither numerous nor definite in character.

A portrait of the patient was taken on May 11th, and on that date we changed the local treatment. The use of iodoform, which had been persevered in for a month, had entirely failed. The sores had all of them spread; they were still very painful, and covered with a glutinous secretion. We had used mercurial ointment by inunction for several weeks without producing any definite effect on the gums. I had succeeded at one time in making him fairly tolerant of the iodide. Under its influence a dusky pustular rash had appeared on the fronts of his thighs and on his bald scalp. Neither from the iodoform externally, from the iodide internally, nor from the mercury given by the mouth and used by inunction, had any real benefit accrued to the sores; on the contrary, both the parent sore and the three satellites had all continued to extend. It is to be observed that the treatment had been carried out with the advantage of sea-air at Folkestone. Although Mr. G—— had kept up his health fairly, yet he had lost some flesh, and had become nervous and very emotional from the pain he had suffered and his disappointment at the non-success of the treatment. I now advised him to leave Folkestone and come to London, and prescribed for him the mercurial vapour bath and the use of a sulphate of zinc lotion.

My notes on May 20th record: "It may be said that the sores are decidedly more healthy since the zinc lotion was used. They have contracted somewhat and are less inflamed, and the secretion is much less; but they still fail to show any healthy granulation. He has had a calomel fumigation bath every day for nine days, but, as yet, his gums are not touched. That the improvement in the sores is not due to the mercury, but to the local treatment, is made certain by the fact that the sore on the middle of the scalp to which the lotion has not been applied remains just as it was. Under the influence, apparently, of the irritation of the vapour bath, the

pustular eruption on his thighs has much increased. Some spots have also come on his hands and some on his scalp. They are symmetrically placed, but I think that they are certainly not a syphilitic eruption. Many of them are little purulent vesicles like small chicken-pox spots, containing pus; but others are indolent pustules, with infiltration at the base. It is possible that the influence of the mercury is less definite on account of our having allowed Mr. G—— to go out a little every day. He objects very much to being kept to bed, as he says he can bear the pain better if he gets out a little.

Sept. 6, 1886.—To give a further summary of the progress of Mr. G——'s case, it may be stated that he has now been six or seven months away from business. He has resided four months at Folkestone, and has been using the mercurial vapour bath, a drachm at a time, and taking mercury and iodides internally. We have pushed the remedies as much as he would bear, and have frequently had the mouth slightly sore. The condition of the ulcers has been slowly improving, and they have always improved most when he has been using the remedies most freely, and relapsed if they were partially suspended. The improvement has never been rapid, and none of the sores have ever granulated freely. I have often wished to use the acid nitrate of mercury, but Mr. G——, who is not very courageous as regards pain, has always begged off. The large ulcer on his face has now almost healed, but it varies but very little from week to week. There are three small ulcers on his scalp, all on the left side. One of these is as large as a shilling and one not bigger than a split pea. With the exception that they show no definite granulations, they are not unhealthy. They have remained almost exactly as they are now for almost two months, and this in spite of the fact that the gums have been continually sore. He is now, in addition to the mercurial vapour bath, taking half a grain of calomel and half a grain of opium three times a day. This pill has suited well, and has kept the gums sore without disturbing his health better than any other remedy which we have tried. For the last two months Mr. G—— has been quite free from all eruption. It is to be

noted that he has throughout never had any sore throat. The sores have been of late continuously treated with iodoform or iodol, both in powder and ointment.

About a month after the date of the last note Mr. G——'s sores were at length soundly healed. He returned home after having resided about eight months at the seaside, and having persisted with specific treatment the whole time. I advised that he should still continue mercury after his return for a month or two. After his return I did not see him again, but I heard that he remained well as regards syphilis, and that he died about two years later as the result, I believe, of a short illness from an acute disease.

I do not know that in the whole course of my practice I have ever had a case the treatment of which was more disappointing. For a long time nothing appeared to do any good, and the final result was that almost the whole of the lower eyelid was destroyed and the face much disfigured by scars. In reviewing the treatment, I regret much that I did not insist on the use of caustics. They had, however, been fully employed before I saw the case, and the part involved (the eyelid) was not one well suited for their application. From the use of constant immersion, a measure frequently of the utmost value, we were of course wholly precluded.

This case seems to illustrate remarkably the phenomenon of satellite sores, all the ulcers from which Mr. G—— suffered having been near to the parent one. The original sore was at the outer canthus of the eyelid, and within a few weeks two others developed quite separate from each other on the cheek of the same side. After a considerable period a third formed on the scalp of the same side, not far from the parietal eminence, which, like the two on the cheek, became a deep, ugly place. Next came two others on the same side of the head, nearer to the forehead, neither of which ever became large although they resisted treatment much as the others. I cannot but suspect that all these sores, occurring as they did within nine inches of the parent one, were due to absorption by lymphatic trunks. At no time was there threatening of similar sores on any other part of the body. It is of course possible that they were caused not by absorp-

tion, but by surface-infection. On this hypothesis, however, it is not so easy to see why they should have occurred on the scalp. On the cheek surface-infection may have very easily taken place. I must admit that the theory of lymphatic absorption is somewhat invalidated by the fact that we never had the slightest inflammation of the lymphatic glands.

For a considerable time, as has been described, Mr. G—— was troubled with a pustular or almost lichenoid eruption on the thigh; but it never assumed the features which would have made one definitely conclude that it was syphilitic. I suspect that it was due to the iodide. He never throughout had the slightest sore throat. It is to be observed that the resistance to treatment concerned alike local measures, internal specifics, and sea-air. He never improved rapidly under anything; but that he was always better when salivated, and relapsed when the quantity of mercury was diminished, was beyond question.

Review of the Case, August, 1891.—I have transcribed the above notes just as they were written at the time of its occurrence, now five years ago. Reviewing the facts, I now feel no doubt that we had to treat a primary chancre resulting from the accidental contamination of a suppurated styne on the eyelid. In such a case no question arises as to the continence of the patient or the truthfulness of his statements. It was, so far as he was concerned, a matter of mere accident. The explanation of the development of phagedænic action in the first instance is to be sought in some hypothetical idiosyncrasy on the part of the patient. Once begun, that action maintained itself by the contagion of affected cell-structures, and in this way it spread in lymphatic spaces and produced the satellite sores. The absence of gland implication goes for nothing in reference to the diagnosis of syphilis, for phagedænic sores scarcely ever affect the lymphatic glands. The absence of definite secondary symptoms is to be explained by the fact that the patient was almost from the first under the influence of specifics, and to the same we must also attribute the completeness of the final cure. The inadequacy

of iodoform, even when most freely used, to stop certain kinds of phagedæna was fully proved. The inefficiency of specifics given internally must also be admitted, though respecting them, and iodoform also, we must by no means conclude that they did not exert considerable influence. The real cause of the obstinacy of the disease, of its being so much more protracted than is usual in phagedænic sores on the genitals, was that on account of the part affected and the patient's reluctance to bear pain, the two main remedies for phagedæna—the acid nitrate and the immersion bath—could not be employed.

No case could better demonstrate the necessity in phagedænic sores for the double treatment, the free use of specifics internally, simultaneously with the liberal and repeated employment of the appropriate local measures. The one class of remedies is aimed against the syphilis and the other against its accidental concomitant, the phagedæna. Either alone is inefficient.

CASE II.—*Extensive phagedæna of the penis in connection with a primary sore—Phagedænic Ulcers on the scalp—Immersion treatment and specifics.*

A case which bears somewhat on the one I have just narrated is that of a gentleman whom I once attended on account of a phagedænic sore on the penis, and in whom very peculiar symptoms of the secondary class subsequently occurred. This gentleman, who was in good health, and aged 39, was exposed to risk on January 18, 18—, and again a month later. Immediately after the last occasion a sore formed, and a fortnight afterwards he was brought to me, by the surgeon whom he had consulted, with an indurated sore in the middle of the reflected prepuce, which presented a distinct slough on its surface. He had a slight and doubtful lichenoid eruption on his chest. I thought it probable that the disease had been contracted at the date of the first exposure, that is six weeks before I saw him. I advised the liberal use of iodoform, and of course prescribed mercury. Under this treatment his sore soon became healthy, and on April 9th, five weeks after I had first seen him, it appeared

to be quite healed and no secondary symptoms had developed themselves. At this date, however, a fresh symptom had shown itself. The penis was much swollen, and on its dorsum the skin was dusky as if about to slough. There was fluctuation, and we at once determined to lay open the abscess. An incision let out a quantity of thin, discoloured fluid, with which the gangrenous cellular tissue was infiltrated. Three days later, as the whole skin was evidently about to slough and the parts were brawny, we put him under the influence of ether, and with a Paquelin's cautery laid open the prepuce and the skin of the penis up to the pubes. The cautery iron was used in the freest possible manner to destroy the infiltrated tissue. As the whole penis was greatly swollen a very large and ugly wound was the result. After this I kept our patient night and day in a hip-bath for nearly three weeks. On account of profuse hæmorrhage it was necessary on different occasions to tie both dorsal arteries of the penis, and more than once I had to apply the acid nitrate of mercury liberally to different parts of the wound, on account of continued phagedænic action. The internal treatment during the whole of this period was by mercury, iodide of potassium and opium. The latter remedy suited very well; the patient used to sleep in his bath, and he kept up his appetite. At length, the wound being in almost all parts quite healthy, we were able to send him to the seaside. Here his health very much improved, but in spite of the most careful treatment by iodoform and the internal medicines, there remained a deep pocket on one side of the penis, in which phagedæna was still progressing. At this time by far the larger part of the wound was soundly healed. I applied the acid nitrate of mercury and nitric acid several times to the unhealthy part without success, but finally, after having filled the cavity with a chloride of zinc paste and caused a considerable slough, it took on healthy action.

We now come to the story of the constitutional symptoms. There was never at any time whatever the slightest irritation of the inguinal lymphatics, nor was there, although we inspected the skin every day, any general eruption of a secondary type. On the scalp, however, where the patient

had been, as he said, liable to a number of little spots, which he used to pick, a number of deep punched-out ulcers formed. Upon these the internal treatment appeared to have little or no influence, nor did iodoform applications succeed better. The only remedy which was in the least successful was the repeated application of the acid nitrate of mercury. A sore of a similar kind threatened on the middle of his forehead, and another about the same size on one ala of the nose, both of which were treated by the application of the caustic.

This patient remained under my observation from March until September, and during the whole of this time we were administering mercury and iodides freely. It may be fairly supposed that it was in consequence of this treatment that he never had any real outbreak of secondary symptoms of the ordinary class. Thus he never had any eruption on his body or limbs, nor the slightest affection of his throat or mouth. Yet that he was constitutionally affected by the syphilitic poison there cannot, I think, be any doubt, considering the sores which appeared on his scalp and on his face also. There were many of them, and they were of exactly the same character as those in the case which I have just narrated. In each of the two cases it would appear probable that the specifics which were so freely used were inadequate to the absolute arrest of the disease, although they suppressed all its more ordinary manifestations. On the scalp in the second case the parts which were attacked were those which had been to some extent inflamed before, and it was this fact which made them vulnerable.

As regards the phagedænic and gangrenous abscess on the penis which occurred in this case, I have little doubt that it resulted from the direct extension from the base of the sloughing ulcer into the cellular tissue. Thus, although the ulcer itself healed under the iodoform, contamination of the subcutaneous cellular tissue had already taken place and spread. I have several times witnessed this burrowing in the adjacent cellular tissue in cases of phagedæna. In a patient who was brought to me recently by a surgeon who told me that the chancre had been phagedænic, and that the prepuce had been laid open for its treatment, there was

extension of inflammation down the corpus spongiosum and an abscess under the root of the penis. In another, a case which I saw not long ago with Dr. Boor Crosby, it became necessary to amputate two fingers on account of the destruction of the parts produced by the burrowing in the cellular tissue from a phagedænic sore.

Although phagedæna is a most troublesome and serious complication while it lasts, and although it is not by any means always protective against constitutional syphilis, yet it does not usually imply a severe or protracted implication of the patient's system. I have treated many cases of very severe phagedæna affecting chancres, which were most troublesome for a considerable time, but in which, after once healing had been produced, the scar remained sound, and the patient had no further manifestations of the disease. One of these has especially impressed itself on my memory, for the patient, who is now a leading member of fashionable society, has remained, as a friend, under my supervision for twenty years since his attack of syphilis. In this case there was no question as to the disease being attended by rupial sores as a secondary symptom. The phagedæna destroyed a considerable part of the glans, and required the almost continuous use of the warm bath for nearly three weeks. The iodide of potassium was very freely used and mercury sparingly. The result was that the patient regained excellent health, and has been for twenty years past quite free from relapses.

All that I have seen of phagedæna in connection with syphilis would lead me to regard it as a sort of accident dependent possibly upon some unrecognized peculiarity in the patient's health, but by no means implying cachexia or debility. In proof that it is a local process, a patient may have phagedæna of one sore whilst others are healing in the most satisfactory manner. Or one part of a sore may continue to spread whilst the rest presents granulations which are florid and of a most healthy character. This latter fact, which is a matter of almost everyday observation, would lead us to believe that the poison which produces the phagedænic action may at times be confined within the cell-structures of the part, since it does not diffuse itself readily

over the whole surface of the sore. It is impossible to believe when a man presents two sores, one phagedænic and the other rapidly healing, that there is anything in the state of his general health which explains the peculiar condition of the first. The results of treatment also favour this view, for it is almost invariably by local treatment that the process is arrested. In not one of the cases which I have mentioned above was the patient in any degree out of health before the syphilis was contracted. In not one had there been any intemperance, neglect of cleanliness, or exposure to debilitating influences. In each instance the chancre had been contracted from a person who certainly did not suffer with any unusual severity. I cannot think that there is any reason to think that the phagedænic chancre is due to any peculiarity of the contaminating virus, and must repeat that it ought to be considered as an accident of idiosyncrasy, and that it should be placed side by side with the occurrence of cancrum oris after measles, when this happens, as it often does, in perfectly robust children.

Notes on the Crateriform Variety of Phagedænic Sore.

I should like to be allowed to employ the term "crateriform phagedæna" as applicable to the kind of sores which were present in the cases under discussion. It is very different from the more ordinary types of phagedænic action. In these latter there is usually but little infiltration or swelling of the adjacent parts, and the ulceration or sloughing, as the case may be, spreads widely and irregularly. In these cases the sore is more or less circular, its borders uplifted by swelling, and a central crateriform ulceration with pultaceous contents is the result. The appearances produced are much like those of a gigantic boil. If satellites occur, they reproduce very exactly those of the parent. I need not say that this crateriform phagedæna is of course perfectly distinct from the form of malignant ulceration of the face to which I have ventured to give the name of crateriform ulcer. But it may be noted as a remarkable fact, to be explained perhaps by some peculiarity in anatomical structure, that the face is

the region which shows the most characteristic features of both.

This crateriform phagedæna, of which I have seen but very few examples, has almost always occurred under conditions which caused great difficulty in diagnosis. In more than one case it has been almost impossible to say whether the condition was primary, secondary, or tertiary. Of this statement a case which is published in my little work on Syphilis is a good example. In it, a gentleman who had had syphilis severely twelve years before, and had been cured by specifics, became the subject of a sore on his penis as the result of fresh contagion. This sore was punched out in the first instance, but became indurated after it had healed. About two months after the first appearance of this last sore a little scaly patch formed on one cheek, which slowly passed into a most characteristic condition of crateriform phagedæna. This occurred whilst the patient was under treatment by specifics, when the sore on the penis was disappearing quite satisfactorily, and when no other secondary phenomena had shown themselves. A large, deep, and most ugly ulceration developed in the cheek. It resisted treatment for some time, but finally yielded to the vigorous use of iodoform and internal specifics. These facts will be found recorded at page 340 of my book, but I am now able to add to the narrative, then given, the statement that the man, after once his sore was healed, remained quite well. I have seen him recently, five years after the attack; he has had no further symptoms, and has, with medical sanction, recently married. In this instance I was at first inclined to suspect that the sore on the cheek was the result of direct inoculation from that on his penis, but in reviewing the facts now in the light of subsequent experience, I am more inclined to think that it was a secondary phenomenon, and that the phagedænic action which it took on was probably due to the fact that the man had, at least on one occasion, previously suffered severely from syphilis. The lesson which it afforded as regards treatment was definite. It was quite clear that internal treatment alone could neither prevent nor cure, and that there was needed a vigorous combination of external and internal measures. It has also

been made quite clear by the subsequent progress that the patient's general health was in no way specially at fault, and that the occurrence of the phagedæna denoted idiosyncrasy rather than cachexia. When once the phagedænic action was conquered, the sore healed well, and although a large scar has been left, it is now perfectly sound.

CRATERIFORM PHAGEDÆNA OF CHEEK.

(Postscript to CASE II.)

I find that I have omitted a statement in reference to Case II. which is of great importance in reference to the case just narrated. The reader will have seen that in this case the patient, after a phagedænic sore on his penis, had crateriform sores on his scalp and forehead (see p. 115). He remained under full treatment by specifics from February to September, being most of the time at the seaside and in good health. All his sores were well healed. In the end of August an irritable papule appeared in his left whisker. It slowly increased in spite of continued internal treatment, and in the second week of September it had developed into a deep phagedænic ulcer of the crateriform type. I now treated it freely with the acid nitrate of mercury. The local use of iodoform and specifics internally had been ineffectual. There was no probability in the supposition that this sore was from local contagion. More probably it was a secondary manifestation.

SOME RARE FORMS OF DISEASE ALLIED TO LUPUS.

I HAVE long taken great interest in pleading for the non-specificity of the lupus-process, and for the existence of a considerable group of maladies which partake more or less of the nature of lupus, but which differ much among themselves, and which by no means conform closely to a well-characterized type of lupus vulgaris. My argument is that there are various forms of chronic inflammation of the skin, some closely allied to chilblains and some to scrofulous affections, but which yet partake in essence of the nature of lupus, being dependent upon the same constitutional peculiarities which predispose to it, running a very similar course and being amenable to similar measures of treatment. That there are connecting links between chilblains and lupus erythematosus, between lupus erythematosus and lupus sebaceous, and between the latter and lupus vulgaris, and that each and all are to some extent dependent on that state of constitution which we call "scrofula," is a firm article in my creed. The cases which I am now about to record none of them approach at all closely to the type of lupus vulgaris. My argument respecting them, however, is that they belong to the lupus family. Their claim to that association is, I hold, proved by the fact that they are examples of chronic infective inflammation which is destructive of the integrity of the tissues invaded, and associated with a certain degree of defective vigour in the patient's health.

Feeble circulation—Raynaud's phenomena—Vesicating Erythema on cheeks—Scars on hands—Question of diagnosis from Lupus Erythematosus—Urticaria Nodosum.

Miss P——, 19, was sent to me by Mr. B—— in February,

1886. She was the subject of a very peculiar form of vesicating erythema on both cheeks. Her circulation was very feeble, her hands being dusky and mottled with plaice-spots, and her nose being cold and livid.

The red patches on her cheeks were very large, exempting only the nose, lips, and chin. They were abruptly margined, and at first sight I made no doubt that we had to do with a case of unusually extensive lupus erythematosus. There were no vesications when I saw her. The suggestion of lupus seemed however to be put aside by the statement that the patches varied much from time to time, and that once in every few weeks she would have an attack in which the eyelids were almost closed by swelling. The liability to this vesicating erythema of the cheeks had first shown itself in September, 1885, that is about six months ago. At times her face had been quite well, but rarely for more than a week or so at a time. She had suffered from her hands and feet from childhood. She did not consider that her hands were liable to chilblains, but clearly the affection of them was of that nature. Her fingers were swollen, dusky, and cold, and along their sides were groups of small, deeply-placed vesicles, somewhat like the sago-grain. Her ears were swollen in a similar manner, but not to so great an extent, and her nose was also dusky and chilly. A very peculiar condition had occurred on different parts of the limbs. Puffy, ill-defined swellings would develop in the course of a few hours, and then rapidly disappear, leaving greenish-yellow stains, like those of a bruise. She showed me some of these stains on her shoulders. I thought that they were probably due to bruising, or at any rate to pressure, but she assured me that such was not the case. She had had them also on the legs. They appeared to be analogous to the swellings of erythema nodosum, but of much shorter duration, and more liable to recurrence. She told me that the attacks of swelling of the face were attended by some swelling of the lips and stiffness of the tongue, so that she spoke with difficulty. Her pulse at the time of her visit to me was 84, and her temperature but little short of 100. She was an orphan, and had no relations living. The history of tuberculosis in her family was strong. She stated that as

a child she had been very liable to catch cold, and to have sore throats. At that time she was considered delicate, but at 16 she was stout and strong. From the latter age to the present time she had been losing flesh, and the symptoms of feeble circulation had been increasing.

Although these attacks of vesicating erythema are in some respects analogous to erysipelas, yet I think it probable that, after all, the case does also approach lupus erythematosus. A young lady who consulted me on the same day, with a dry patch of lupus erythematosus on her nose, and scars in the concha of both ears, had her hands precisely in the condition above described. It must be remembered also, when we compare it to erysipelas, that the patches of erythema on the cheeks were absolutely symmetrical, well-defined, and that at the time that I saw them, although the redness was vivid, there was not the slightest trace of edema, or vesication. Lupus erythematosus in its typical forms, is well known to be liable to attacks of erysipelas, which are sometimes recurrent. In this instance the recurrences were so frequent that the patches scarcely ever disappeared. We must remember also that in lupus erythematosus, next after the nose, cheeks, and ears, the hands are the parts most likely to be attacked. The relationship of lupus erythematosus to chilblains on one hand, and to tuberculosis on the other, is, I hold, most definite. It may be considered to be in some cases only a modified form of chilblain, and exactly the same statement is true of the phenomena in our present case. It should be stated that at the time I saw this patient, the weather had been for two or three months unusually cold, and the condition of her hands and feet had no doubt been aggravated by this. The erythema of her face, however, commenced in hot weather. It had been made worse at two seaside places to which she had been taken the preceding autumn.

My recommendations as regards treatment were, that she should seek some occupation which should allow of her remaining constantly in a warm room, that she should have a very liberal diet, and take steel.

The case may be profitably compared with one which I have

recorded at page 335, ARCHIVES, Vol. I. In it the disease was far more severe, but the condition of the hands and the liability to erythema nodosum were very similar.

Destructive Kerato-iritis in association with a chronic disease of the skin, joint changes, and possibly pulmonary tuberculosis.

Mr. Nettleship showed me in St. Thomas's Hospital a case of most unusual interest and difficulty. The patient was a young girl of about fifteen, in whom an insidious inflammation of both eyes, which had commenced more than two years ago as a form of kerato-iritis, had entirely destroyed both the organs, and had been accompanied by a general and very peculiar disease of the skin. The girl when I saw her was fairly nourished, but had, some months before, been a good deal emaciated, and I was told that she had improved in this respect under cod-oil. She was, however, very pale, and looked feeble. She was confined to her bed. As regards the eyes, Mr. Nettleship told me that in the first instance there had been a form of chronic iritis, with punctate deposits on the posterior part of the cornea, and some ciliary congestion and diffuse haze of retinae. Subsequently opacities had occurred in the vitreous, and now at the end of two years the irides were disorganized and lustreless, the anterior chamber was shallow, the lenses opaque, and the globes slightly softened. She had but bare perception of light. In the course of the case (Autumn, 1890), an eruption of common shingles, curving round the right hip, had occurred (at this period no arsenic had been given). The eruption on the skin, which I was informed had been present, more or less, from the time when the eye disease began (January, 1889), but had much increased of late, and seemed to have begun with erythema nodosum on the legs, was now of a mixed character. On the legs it consisted of small dark patches covered by adherent dry scab, and surrounded by an areola of livid and almost black congestion. There was little or no secretion beneath the scabs, and they remained adherent for weeks without change unless interfered with. On the back and shoulders and arms there were many patches of various sizes, covered

with closely adherent scale crusts, but with much less congestion than on the legs. Some of these had healed and left scars; on others, on which the crust was perfectly dry, there yet appeared, on detaching it, clear evidence that a scar would result. Together with these patches there were areas of much larger size, of a dusky redness with slight thickening. These were marked over her hips and outer side of thighs, but especially so on her forearms. They were much like the conditions attending lupus erythematosus. These peculiar areas had appeared quite late in the case, and rather quickly, and (with the history of erythema nodosum at the onset of the illness) Mr. Nettleship had at first thought that they might represent some anomalous form of erythema with effusion. Her face and head, hands and feet, were quite free from eruption.

Another feature that was marked in the case was a general tendency to chronic rheumatism. Her ankles and knees were a little swollen, though with no appreciable effusion of synovia; and on the backs of her wrists there were softish swellings, probably of a ganglionic nature from effusion into the sheaths of the tendons. Lastly, it has to be added that although no very obvious symptoms of pulmonary disease existed, stethoscopic examination had revealed evidence of tubercle in one lung. The history which the girl gave did not throw any light on the cause of the malady. At the time that she became ill she was engaged in assisting her mother in laundry work, but she did not consider that she had been unduly exposed to cold or damp. She was juvenile in appearance, demeanour, and development, and had never menstruated; skin fair, hair reddish yellow. She had always had a quiet, phlegmatic manner. She attended as an out-patient at Moorfields for nearly two years, gradually becoming thinner, and was much emaciated when transferred to the ward at St. Thomas's in the autumn of 1890. During the winter of 1890-91, under cod liver oil and a good liberal diet she steadily gained in weight. No drugs and no local applications seemed to have had the slightest influence on the course of the changes either in eyes or skin. The medical man who originally sent her to Moorfields thought the case syphilitic, and Mr. Waren Tay, who examined her once at Moorfields soon after the

appearance of the scaly brownish-red spots on the trunk and arms, suggested that if mercury had not been given it should have a fair trial. There are, however, no reasons to suspect acquired syphilis, and none of the recognized signs of inherited taint are present.

From the notes taken at Moorfields when the patient was under Mr. Nettleship, Feb. 27, 1889, I learn that there was no rheumatism, gout, tubercle, or syphilis in family. Patient is the eldest of three. The others are said to be all healthy.

In this case it would appear probable that we have to deal with a patient of congenitally feeble organization, and of "strumous" tendencies. Most likely there is also an inheritance of gout. Under the debilitating influence of recently developed puberty, and perhaps of over-work, with exposure of the eyes to hot steam, an attack of kerato-iritis was developed. This, in connection with the patient's age and proclivities, proved infective to the system generally, and was the cause of a mixed eruption, which partook in part of the nature of lupus.

It may seem strange to insist upon the suspicion of both gout and struma in a case in which the family history, as regards both these affections, is wholly negative. The case is, however, a most exceptional one, and its explanation can at best be but conjectural. I feel tolerably confident that syphilis does not enter into the list of causes. The progress of the destructive inflammation of the eyes is not in the least like the keratitis of congenital syphilis, whilst on the other hand it very closely resembles that of certain cases of inherited gout. Nor is the eruption on the skin at all like anything I have ever seen in connection with syphilis. We have proof of rheumatism, and considerable probability of tuberculosis, yet the ulcers on the skin can scarcely be regarded as partaking directly of the nature of the latter malady. They appear to belong rather to the old category of scrofula than of tuberculosis. The case may be compared with interest with some examples of fatal cachexia in association with scar-leaving eruptions on the extremities which are given in the first number of the ARCHIVES (see p. 20, Vol. I.), and also with the extraordinary case at page 334, Vol. I. In

none of these, however, was there any destructive inflammation of the eyes, though in the latter an unexplained attack of proptosis occurred. I find it very difficult not to believe that with such symptoms as Mr. Nettleship's patient has displayed there must be some very definite inheritance of proclivity, and should most especially suspect the inheritance of gout. It is to be admitted that this history is wholly absent, but in respect to this negation we cannot, as medical observers, wholly ignore the fact that the truth as regards parentage is not always given us, even when it is well known.

Lupus of a pustular, eczematous and acneiform type.

Dr. Withers, of Nottingham, sent to me a young man who afforded an instructive example of a somewhat special type of lupus. Were such a name permitted, I would call it an impetigo-eczema-lupus, for it partook of the nature of the three maladies. The borders of the patches were distinctly lupus, and the disease was creeping on by a spreading edge. It was an edge, however, which consisted not of the apple-jelly infiltration, but rather of chronic inflammation which was attended by the formation of numerous little pustules. The skin which was involved was left in a hard, thickened, brawny condition, upon which pustules continued to appear. The pustules were in many cases clearly in connection with the hair follicles, and partook therefore of the nature of sycosis. On his cheeks and nose there were numerous comedones, and a few inflamed acne spots. There was nothing which could be identified as the apple-jelly growth anywhere; yet I may repeat that no one would have hesitated for a moment to call the larger patch, under the boy's chin, common lupus. The patient to whom the above statements refer was a lad of fifteen, whose father had been the subject of chronic eczema. He himself suffered from a feeble circulation, and had cold hands and feet; but had never been liable to chilblains. I was told that his father was very much inconvenienced by his cold extremities. The lupus-disease in the boy had begun when he was nine years old, by the formation of a glandular abscess under his chin. This was opened, and an eruption which was called eczema developed around the orifice. This gradually

passed into the large lupus patch which now constituted his chief malady. This patch occupied a large area under his chin and on the sides of his neck, passing upwards upon the sides of his cheeks also. It had an abrupt border, and the skin was uniformly thickened and stiff. On the boy's nose a patch had recently appeared, which was made up of pustules which had become confluent; and had produced a condition which it was impossible to say whether it should be named acne tuberosum or lupus. It was exactly like that of a young lady sent to me by Mrs. Garrett Anderson, whose portrait is in the collection of the Royal College of Surgeons. I should have little doubt that if this group of pustules were neglected they would pass into the condition of common lupus. Although the disease had in the first instance begun as a glandular abscess, there was but little evidence of further implication of the glandular system. There was some thickening of the cellular tissue under the chin, and it might be some implication of glands, but nothing extensive or definite.

The question of treatment in such a form of lupus as this presents some difficulties. The patch covered a surface as large as two outspread adult hands, and was everywhere much too hard to permit of scraping. I suggested the use of the actual cautery, and proposed by its means to freely destroy the advancing edge; and also by dipping the point of the cautery into the thickened growth at various parts so as to set up inflammation. The use of protective plasters, medicated or otherwise, might also be expected to have considerable influence in softening the scar. For the nose and for the borders of the large patch, clearly some caustic treatment, either the cautery or the acid nitrate of mercury, was the remedy indicated.

[This lad was admitted (June, 1891) into the London Hospital under the care of my son, by whom vigorous treatment by the cautery, &c., was carried out with excellent results.]

Acute Lupus Erythematosus of peculiar type.

On Feb. 17th Dr. T. J. Hitchens sent to one of my Post-Graduate Lectures a very interesting example of what might

be called acute lupus erythematosus. The patient was an elderly woman, rather stout, and who had formerly been very florid. Her cheeks were puffy and rather lax. She had never suffered from chilblains, and she was not aware of any tubercular history in her family. The history of her lupus was that it had begun only three or four months before we saw her, and that it had spread very rapidly. It had begun on one cheek, but had very quickly developed symmetrically on the opposite cheek, on the chin, on the forehead, on the ears, and on the forearms. The only exception to symmetry was that the concha of the right ear was involved, while that of the left was exempt. One peculiarity of the case was the very deep tint of the congestion, in some parts it was a very deep plum-colour, in some a brick red, and in others almost livid. The patches were for the most part discontinuous; thus that which covered almost the whole of the nose did not join with those on the cheeks, and that on the chin as well as those on the forehead were quite separate. The parts on the cheeks involved were exactly those of the flush patches. The patches on the cheeks were considerably swollen, and, although I believe they had never been actually ulcerated, there was a certain amount of puckering in their centres, and they looked as if about to ulcerate. They reminded me of the state of the cheek of a patient who was sent to me by Mr. Boyter Johnson, and of whom a portrait has been preserved. On the backs of the forearms there were groups of erythematous papules of the same colour as the spots on the face. The single papules were, however, quite small, and almost like abortive pustules. There was no diffuse erythema. There were no spots whatever on the hands, nor did they display any peculiarity as regards their circulation.

The fact that the hands were not affected in this case is of interest in connection with the history of entire absence of tendency to chilblains. The disease clearly had not much to do with peculiarity of circulation.

Lupus erythematosus shows itself as an acute affection in several forms. Sometimes it is a very superficial erythema, almost erysipelatoid; sometimes it is scarcely to be distinguished from rapidly spreading chilblains; and in a third

PLATE XXXII.

ACRO-ASPHYXIA (RAYNAUD'S PHENOMENA).



IN this portrait is shown the hand of a young lady who suffered habitually from a very feeble circulation. Whenever she was exposed to any degree of cold, her hands became livid and would remain so for days together. The degree of blueness has scarcely been sufficiently marked by the artist, since the day on which the portrait was taken they were not at their worst. On several occasions I saw the hands so livid as to suggest anxiety lest gangrene might occur. None was, however, ever produced. This condition may be regarded as the simplest, most common, and least severe of the forms of what is known as Raynaud's Disease. Its main feature, a lifelong and constantly present excess of susceptibility to the influence of cold, with the result, not of pallor (*digiti mortui*), but of asphyxia and blueness. These cases differ from the forms in which Acro-sphacelus is threatened in that paroxysmal exacerbations are far less marked. The liability is a constant one, and, having once been developed, usually persists through life.

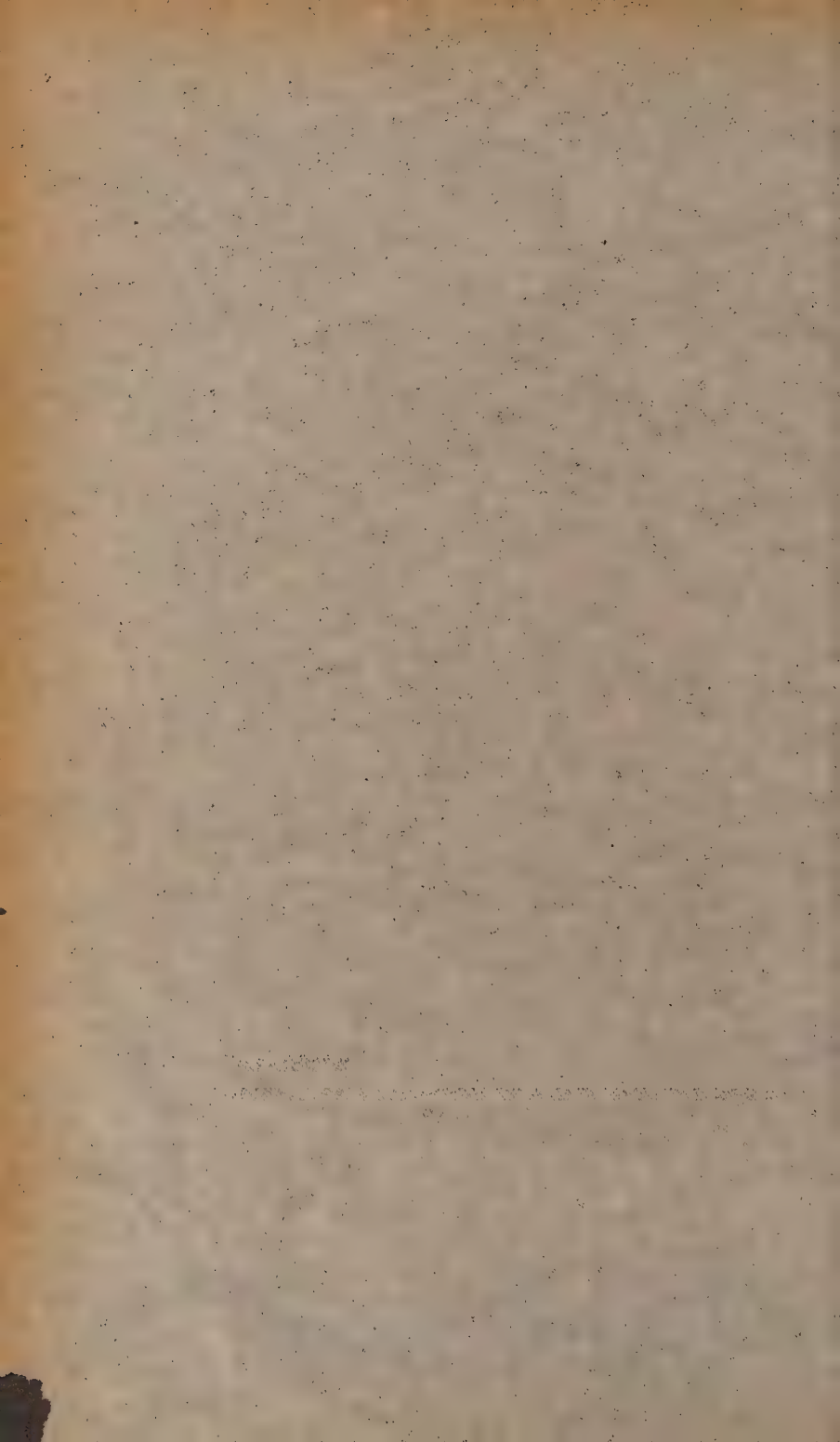




PLATE XXXV.

RECURRED SCIRRHUS IN PECTORAL REGION.



IN this Plate are shown the conditions produced by a return of scirrhous cancer of the skin after excision of the breast. It will be seen that there are a number of ulcerated nodules adjacent to the scar. These are scattered somewhat irregularly, and there is no general infiltration of the integument, such as is known under the term "scirrhous en cuirasse."



PLATE XXXVI.

PRIMARY SARCOMA OF SKIN.

THIS portrait was taken from the abdomen of a woman who had for some years been the subject of spindle-celled sarcoma of the skin. It is now eight years since the portrait was executed, and the disease has made no material advance. She is still able to earn her living as a cook, and no gland disease has been developed. Before I saw the case, excision had on one occasion been performed, but with a speedy recurrence. Knowing how inevitable recurrence is in these cases, I have always declined to operate; but on two occasions I have excised considerable portions at the patient's request, on account of the painfulness of individual nodules. These have afforded opportunities for microscopic examination. I should much like, if any appropriate name were at hand, to separate the group of cases of which this is an example from other forms of primary sarcoma of the skin. Their clinical course is very different, although the verdict of the microscope does not separate them. The external features are a group of moderately firm nodular growths, which have a remarkable tendency to become slightly constricted at the base, and to assume thus the mushroom form. Some of them become red and glossy, whilst others are pale. They do not readily ulcerate; and however long the disease may last, the lymphatics do not become implicated. The extreme slowness of progress which this case illustrates is but rarely witnessed. All the cases are, however, essentially chronic. Mr. T. Smith has published a case which affords an almost exact parallel to this, the patient being still living (see St. Bartholomew's Hospital Reports). In that instance the growth was on the shoulder of a lady, and it had been repeatedly excised.



PLATE XXXVII.

PRIMARY SARCOMA OF SKIN IN THE POPLITEAL SPACE.

IN this portrait we have a recurred growth of primary sarcoma of the skin in the popliteal space. The patient was a gentleman of about fifty-four years of age. Part of the appearances exhibited are due to scars left by operations. The disease had been present nearly five years, and repeated excisions of the freest possible kind had been performed. The patient had been at different times, both in consultation and severally, under the care of Sir James Paget, Mr. James E. Adams, and myself; and we had all of us operated more than once. The result had uniformly been a speedy return. The growth had also been freely destroyed with chloride of zinc, but with the same result. The case differed from that illustrated in Plate XXXVI, in the much greater rapidity of the growth of the tumours. They grew so rapidly that it was not possible to decline interference.

In this case, after a whole duration of about seven years, death was brought about by exhaustion.

The portions removed had been repeatedly examined microscopically. In the first instances they were examples of spindle-celled sarcoma, and in the latter ones partook rather of the characters of the round-celled form.

This Plate is, with the preceding one, of great interest, as showing most remarkable similarity in the characters of the growth.



group it is attended by much thickening and inflammatory œdema. To this latter class the present case belongs.

Although there can be no doubt as to diagnosis, it certainly presents some remarkable features of difference from the more common types of erythematosus. The case which I have mentioned above as under the care of Mr. Boyter Johnson is the one most nearly resembling it which I remember. Probably, however, several others in which the flush-patches were the parts first affected, such, for instance, as that of Miss Hubert,* are true allies. They differ, however, from the two cases now under consideration in being far less acute. In Mr. Johnson's case the disease began in the flush-patch, and was attended with so much swelling and inflammation that it was taken for a form of carbuncle. A satellite appeared on the forehead, as is shown in the portrait; but up to the present date none have occurred on the other side of the face. In this instance, in the course of a few months the whole of the cheek and the side of the neck were involved. There was not the slightest reason for suspecting syphilis, and no benefit was obtained from the use of specifics; on the other hand, the patient was much assisted by repeated applications of the acid nitrate of mercury.

Case of Keloid-Lupus on the Breast—History of Lupus Erythematosus on the Nose—A very unusual example of disease of the skin.

One of the most interesting examples of this kind of disease which I have seen occurred in the person of a Mrs. B——. This lady had been for some time under the care of Dr. Aveling, with whom I saw her. She was 50 years of age.

On the inner side of her right breast was an incompletely circular patch somewhat larger than a crown piece. Two-thirds of its edge was quite complete, but at its upper border there was an imperfect gap, thus forming a sort of horse-shoe. Its border was a third of an inch in width, or rather more; it was remarkably firm, almost as hard as keloid. Unlike

* This case with others is recorded in a paper of mine in the *Journal of Dermatology*, on "Diseases beginning in the Flush-patches of the Cheeks."

keloid, however, it had a shelving edge, merging quite gradually into the adjacent skin. In still further difference from keloid its surface was not smooth and glossy, but slightly roughened, showing the orifices of the hair follicles somewhat exaggerated. The hairs themselves were not wholly destroyed. In colour, the patch was of a dull purplish red. The shape of the patch suggested, of course, that it had spread serpigiously, and this suspicion was confirmed by Mrs. B——'s statement that the beginning of it had been at what was now the gap in the horse-shoe, and that it had been for fifteen or twenty years very slowly spreading.

I could not satisfy myself that, on the part from which it had receded, any scar had been left. It had never been in the least ulcerated, nor had it caused any inconvenience beyond a rather troublesome itching. Mrs. B—— was a widow lady of about 50. She had become anxious about the patch, of late, as it very nearly touched the nipple.

It will be observed that it differed from lupus erythematosus in the thickening and induration of the tissues involved. It occurred also on a part in which lupus erythematosus is very rarely seen. It had spread with very unusual slowness, and had persisted as a single solitary patch through a long series of years. Nevertheless I was obliged to make this diagnosis, and finding that she had been under the care of several specialists before, I asked her whether this name had ever been mentioned to her. She said that it had, and that it was the name that Dr. Tilbury Fox had given to the disease some years ago. She also directed my attention to a large but inconspicuous scar on the left side of her nose. This scar was perfectly healthy, and there was not a trace of erythema anywhere near it. She told me that it had resulted from a series of operations by Sir James Paget with the galvanic cautery; they had been done for the cure of a patch which had been diagnosed as of the same nature as that on her breast. It had required four operations with the galvanic cautery and a final application of some caustic to effect the cure.

Clearly the disease had not been an ordinary form of

PLATE XXXVIII.

LUPUS ERYTHEMATOSUS BECOMING GENERAL.

THIS portrait is copied from a drawing lent to me by Dr. Stephen Mackenzie. The particulars of the case will be found in full detail in the 'Clinical Society's Transactions,' vol. xv., p. 252. The portrait illustrates the peculiar form of lupus erythematosus in which the eruption, in addition to symmetrical bats'-wings on the nose and cheeks, tends to become universal, affecting the limbs and trunk also. Although I have used the word universal, it is seldom until a very late stage that the trunk itself is attacked, the disease still showing marked preference for the exposed parts. In all cases of lupus erythematosus of this type, the upper part of the chest immediately beneath the clavicles is a region on which patches soon appear. It will be seen that this part is especially affected in the present case, whilst the lower part of the chest and the whole of the abdomen are quite free. It is a not improbable suggestion that the disease is located by exposure to sun, air, and cold. No one can look at this portrait without, so far as the regions attacked are concerned, being forcibly reminded of Kaposi's disease, xeroderma pigmentosum. Dr. Mackenzie's patient was a boy, aged 19. He had been liable to chilblains, but had otherwise enjoyed good health. The eruption began on the face at the age of 16, and subsequently spread over almost the whole surface. It was attended by the formation of the characteristic discs, and left dull reddish scars. It was abundant on the buttocks. It is one of the most remarkable examples of universal extension of lupus erythematosus with which I am acquainted, and probably affords a good instance of a connecting link between that malady and psoriasis. Whilst the boy was in the hospital, he had an attack of erysipelas, and was very ill. From this he entirely recovered, and the eruption was much improved. Dr. Mackenzie informs me that he died, a few years after the portrait was taken, at his own home—it is believed, of fever.

At pages 107 and 100, 'Archives,' vol. ii., will be found references to other cases of lupus erythematosus affecting the trunk.



lupus erythematosus; nor had it, as regards the slowness of spreading, closely resembled that on the breast, for it had been present less than a year when it was operated on. It had been wholly confined to the left side of the nose; it had been absolutely cured by the cauterization treatment, and during the five years which had since elapsed there had been no sort of relapse. Such a cure of the common form of lupus erythematosus, by cauterization treatment, is not often witnessed, yet probably the disease came nearer in character to that malady than to any other.

There did not appear to be any special diathetic tendency in Mrs. B——, who was in good health and without any known hereditary proclivity. I gave her the same advice as regards the patch on her breast that she had already received from others, and that was to let it pretty much alone.

It was impossible to put aside some degree of anxiety lest at a future time it should exhibit malignant characters.

On Sycosis-Lupus-Keloid.

There is a very peculiar and rare affection of the hairy parts of the skin, which I must mention as a variety of lupoid sycosis. It is that in which large portions of skin become thickened, hard and glossy, and the hairs are aggregated together in tufts, like the little bundles in a brush. There is always an inflamed more or less crusted and spreading edge. The disease is clearly infective, and therefore belongs to the lupus family. It is most frequently seen on the occiput, but occurs also on the chin, and may, I suppose, happen on any part where hairs are large and abundant. It has its syphilitic imitations, but the best-marked examples of it have nothing to do with syphilis. Some cases of common sycosis of the whiskers approach its characters in respect to the thickening and semi-keloid condition which is produced. A main feature of diagnosis between it and sycosis is that the latter is developed in disseminate pustules, and the former occurs in a patch with a spreading edge. I believe, however, that the earliest stage of the affection I am describing is usually pustular. The crops of indolent hard pustules to which many men are liable on the lower part of the occiput,

are probably its earliest or introductory stage. If neglected or irritated by scratching, &c., such cases may pass, by coalescence of pustules and development of infective tendencies, into patches of this sycosis-lupus-keloid.

The disease to which I refer has been figured by Alibert under the name of Framboesia, or Pian.

Mr. Morrant Baker has published in the *Illustrated Medical Journal* a coloured portrait with the proposed name of Acne-Keloid. Since it is an affection of hairy parts, and beginning in connection with hair follicles, I certainly prefer the name Sycosis to that of Acne. In all other points I quite agree with Mr. Baker as to its pathology. When it occurs in elderly persons, I have no doubt that there is danger of its sliding into a cancerous process.

I have not seen many well-marked examples of this malady. Leaving aside several which I remember to have seen when a student, but of which I have no notes, one of the earliest in my experience is that of a man who came up from Yorkshire in 1860, and was admitted under my care into the Metropolitan Free Hospital. He was then about 38 years of age, and he had suffered for two or three years. The patch was on the left side of his chin, and extended under it. It was well circumscribed, raised, and much indurated. On its surface the hairs were gathered together in bundles of from four to twelve, just like those of a brush. I treated this case for a considerable time, and very vigorously. All the hairs were pulled out, and the actual cautery was applied on several occasions very freely to the spreading borders of the patch. At that time I regarded the case as very nearly approaching to cancer. I do not think that there was any reason to suspect syphilis. The man went home and returned to the hospital several times during a year, and the final result was that a complete cure resulted. During the present summer, being on a visit in Yorkshire, I had an opportunity for seeing him. He is now an infirm and paralyzed old man of near seventy. There has never been any return of the local disease, and a supple scar occupies the site of our repeated cauterizations.

Sycosis-Lupus in the back of the head.

May 20, 1875. Mrs. B——, a lady æt. 50. She states that three or four years ago she had a spot form on the vertex of the head. This was when in Italy; it was "quite a large lump." It gradually spread at the edges, and produced the condition now seen. Since the spot which formed in Italy, a large patch with a slightly eczematous edge, not more than a quarter of an inch broad, has spread backwards and downwards from vertex towards occiput. It leaves the scalp nearly bald. At present the red spreading border extends across the back of head almost from ear to ear. There are no broken hairs, and no scurf. When the disease has passed, the hairs grow thin and short, and very few. In this instance, the brush-like arrangement of the hairs was not produced, but the hairs were destroyed. It may be doubtful whether the case should rank as lupus or as sycosis-lupus.

NOTES ON OPERATIVE SURGERY.

OUR treatises on Operative Surgery deal, as it seems to me, too exclusively with the details of the performance of certain special operations. I purpose in the Notes of which the present paper is a first instalment, to take cognizance of this very important department of our Art on a somewhat broader basis. The reasons for and against operative procedures in exceptional cases will be discussed and the details considered as to the performance of some which, on account of their being but seldom required, scarcely take rank in our systematic works. My design will be to supply to young surgeons, as far as my ability permits, details which may be useful to them in deciding when and how to operate under rare or complicated conditions. Nor shall I by any means avoid common, or even seemingly simple, procedures when it may appear practicable to offer hints likely to be of service.

No. I.—*On the Excision of Diffuse Lipomata.*

As a general rule it may probably be said that in cases of diffuse lipoma it is better not to attempt any surgical operation. The only remedies are constitutional ones, and consist in entire abstinence from beer, liberal exercise in fresh air, a lean-meat and non-farinaceous diet, and the use of such remedies as liquor potassæ, arsenic, and the sulphide of calcium. There will occur occasionally, however, cases in which it becomes necessary on account of the enormous size of the growth to consider the propriety of an operation. I have myself operated in three such cases, and in all with satisfactory results. In the last the growths were so large that the patient, a gentleman of middle age, was obliged to

PLATE LVI.

DIFFUSE LIPOMATA OF NECK.

THIS portrait is a good type-example of the common form of diffuse lipoma which produces great bulging masses behind the ears and on the nape of the neck. The patient was, as is usual, a man of middle age, accustomed to a city life, and who had drunk beer freely. He was of excitable temperament, and at times it was feared he would become insane. The fatty masses were developed under his lower jaw, as well as on the back of his neck. If he could be persuaded to desist from beer-drinking, they usually subsided somewhat, and definite diminution was in one instance produced by a couple of months' active exercise in the country, whilst drinking only water. As the tumours caused him great inconvenience, I consented, at his urgent request, to attempt a partial removal. The operation was done in the London Hospital. The wound did not unite by first intention, and some troublesome suppuration ensued. The man, however, finally recovered, and was pleased with the result. He died a few years later, but I do not know the nature of his illness.

Several valuable contributions to our knowledge of this malady have been made by Mr. Morratt Baker. It was, I believe, first recognised by Sir Benjamin Brodie.

(This case is referred to in 'Notes on Operative Surgery.' See p. 134.)



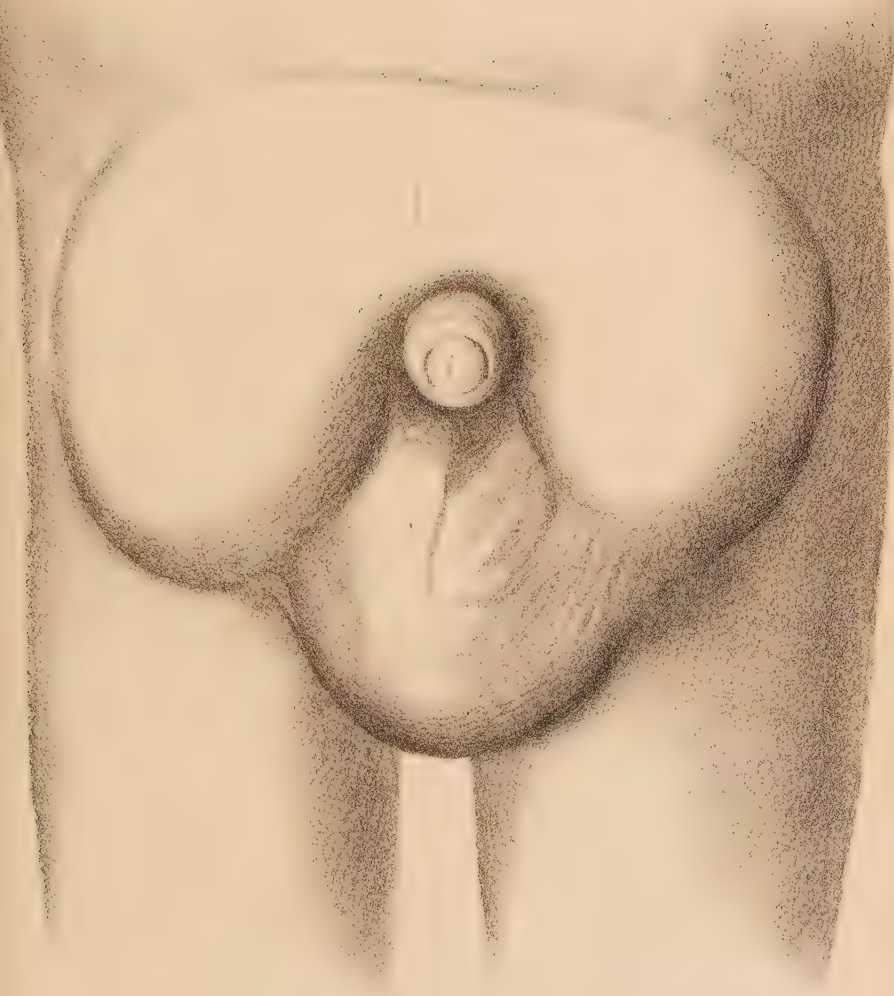
Diffuse Lipoma.

PLATE LVIII.

DIFFUSE LIPOMATA OF PUBES AND PERINEUM.



THIS plate illustrates the occurrence of diffuse lipomata in a position where these growths are not very common, that is, in connection with the genitals. I have only seen one other example of them in this position, and in it the growths had not attained anything like the size of those here depicted. The subject of this case is a man of middle age, who has been accustomed to the liberal use of malt liquors. He has large growths at the back of his neck and under his jaws, but in these positions they have not attained any very unusual size. In the pubic and perineal regions they had become so inconvenient that, as described at page 136, it was thought advisable to remove them. They did not invade either the scrotum or the penis, although these parts were almost buried in the masses of fat which surrounded them. There had been no attempt at renewal of growth since the operation. Under treatment, as already stated, the growth of those in the neck appears to have been arrested.



Diffuse Lipoma.

keep the house and avoid all company. Having fully explained to him the risks, and that the cure at the best would be but imperfect, he willingly availed himself of my wish to operate. I did not attempt the removal of the whole of the growths, but took away only the huge masses which disfigured and encumbered the back of his neck. The operation was a formidable one. An incision was made on each side of the neck, beginning about an inch to the outer side of the spinous processes of the vertebræ, and curving downwards and forwards to the anterior edge of the sterno-cleido-mastoid. Thus a belt of skin in the middle line behind, about two inches in width, was left uncut, and so also the anterior half of the front of the neck. There was, of course, not the slightest limitation to the fatty growth, which adhered firmly both to the skin above and to the fascia beneath. This non-limitation constituted the real difficulty in the operation; for in the deep dissection I found myself in danger of cutting away portions of muscle in several directions. The hæmorrhage during the dissection was also very free. After the two masses had been removed, and all bleeding vessels stopped, I closed the two wounds with sutures, leaving-in a piece of indiarubber tube which ran from end to end of each. A compress of spirit lotion was then applied over the whole, and the patient made to lie on his back with a large cushion of cotton wool supporting the flaps. The wounds healed almost by the first intention, and the patient was exceedingly pleased with the result.

I do not know that I ever in any operation for the excision of tumours made larger wounds than in this case, and may confess that at the conclusion of the operation I felt rather hopeless as to the prospect of obtaining union by first intention. The flaps of skin were very large and loose, having been previously much distended, and the region was one not very easily treated by the ordinary measures of antiseptic dressing. To the special plan which was adopted I believe that the success attained was mainly to be attributed. It consisted in the very liberal use of a spirit of wine lotion. This, in the proportion of one-third spirit to two-thirds rose-water, was during the first four days poured most liberally on.

to the lint which covered the wound. The dressings were not removed until the fourth day, and everything was then quite sweet, and all the stitches were removed. The lotion was continued for three or four days longer, though somewhat less assiduously.

The portrait which I give is not that of the case above described, and it shows tumours which had not attained to a third of the size which were there present. In this case also, which was under my care many years ago, I excised the tumours, or, more properly speaking, a considerable portion of them, and the result was satisfactory. I did not, however, in that case make the dissection nearly so freely as in my second one.

A third case of operation is that to which belongs the lithograph portrait showing a huge tumour occupying the pubic region. In this case the patient had the tumours in the usual position about his neck, as well as on the pubes and perinæum. In the neck, however, the growths have not attained such dimensions as to cause great inconvenience, and he is still able to follow his ordinary occupations. Those on the pubes were so large that they were conspicuous through his clothes, and greatly impeded him in walking. It was only after I had had him under observation for upwards of a year that I consented to his strong wish to have them removed. There was certainly very adequate reason for his encountering some risk to life in order to be rid of such an encumbrance. The man was admitted into the London Hospital, where the operation was performed by my eldest son. It proved to be a very formidable one on account of the extent of the dissection required and the hæmorrhage which attended it. The man recovered after a rather sharp illness, and his present state, three years later, is very satisfactory. There has been no return of the growth, and the tumours about his neck which have not been meddled with, have, under the influence of entire abstinence from beer and the use of the sulphide of calcium in full doses, shown a tendency to diminish rather than to increase.*

* I believe I owe to Mr. Morrant Baker the first suggestion as to the importance of abstinence from malt liquor in these cases.

In reference to operations in cases of this kind I may repeat what I have already said, that they are not to be recommended unless the tumours are from their size more than ordinarily inconvenient, and the patient, after a full explanation, is willing to encounter the risk. The surgeon must be prepared for a troublesome dissection and for an ugly wound. As the fatty mass is entirely without any limitation, he will be compelled to cut through it where he decides to leave off, and will find it almost unavoidable that the edges of the incised parts will present a considerable elevation. Thus the skin cannot easily be made to lie flat. In some parts the fat will probably be found peculiarly dense, and this hardness of it, especially at the edges, will increase the difficulty in making the skin fit well. The operator must also be prepared to find the fat merging itself inseparably with the layers of fascia, and even dipping under the superficial muscles. There will be great risk, unless care is exercised, that parts of the latter will be cut away. Throughout the procedure, which will be somewhat tedious, free hæmorrhage is to be expected.

No. II.—*On the Torsion of Arteries.*

In connection with such operations as have been just described, and other excisions of a like character, I may mention that for many years I have quite ceased to use any other means for arrest of arterial bleeding than torsion. In excisions of the breast, for instance, I do not think that I have during the last fifteen years ever used a ligature. The torsion is always effected by a pair of Wells' clamp-forceps, now in such universal employment. I am always extremely careful to close all vessels, keeping the wound exposed for a considerable time for that purpose. Very seldom indeed have I encountered any secondary hæmorrhage.

No. III.—*Amputation of the Leg in advanced Locomotor Ataxy.*

I have recently had an opportunity for observing the process of repair after amputation in a state of advanced loco-

motor ataxy. It may be of interest to record the result, since, owing to absence of any experience on the point, I felt some misgivings in recommending the measure. The patient was a gentleman of middle age, who had been under my observation for ataxy with perforating ulcer of the sole of the foot for upwards of ten years. The ulcer in one foot had extended to the bones of the metatarsus, and from time to time portions had been removed until the foot had become much shortened. At length suppuration in the ankle joint occurred, and the limb was not only disabled, but had become, not merely an encumbrance, but a cause of failure in general health. The leg was extremely emaciated, being little more than skin and bone. The amputation was done through the middle of the leg, and the only peculiarity encountered in its performance was the extreme condensation of the bone. The medullary cavity, both in tibia and fibula, was nearly obliterated, and the bones were exceedingly hard. No trouble was encountered with the arteries, which were either tied with catgut or twisted. The amputation was by Teale's method. Under an antiseptic dressing the edges of the skin everywhere united well by first intention. About the tenth day, however, the stump became hot and throbbing, and an abscess formed which it was necessary to open in the middle of the face of the stump, and from which a quantity of exceedingly thick, flaky pus was discharged. I much feared that this denoted that the end of the indurated bone had not united to the soft parts, and would undergo exfoliation. Such, however, was not the case, for in the course of a week or two, under the use of syringing, the abscess healed, and the stump became quite sound. The patient has since regained his health so far as the advanced ataxy permits. He has been fitted with an artificial leg, and his stump bears pressure well. The result of the amputation has therefore been highly satisfactory.

No. IV.—*Excision of the Eye in Paralysis of the Fifth Nerve.*

I have long known that entire deprivation of sensory nerves is no bar whatever to the satisfactory healing of wounds in

the parts involved. I have twice excised an eyeball in cases where, from paralysis of the fifth nerve, the loss of sensation was so complete that, although not under any anæsthetic, the patient did not feel any part of the operation. In both of these cases the parts healed just as quickly as if the nerve functions had been normal.

No. V.—*Amputation of the Upper Extremity with the Scapula.*

I had the pleasure of witnessing not long ago at the London Hospital an amputation of the upper extremity, with removal of the scapula and the greater part of the clavicle, by my colleague Mr. Treves. The operation was done according to the method of M. Berger, which appears to me to be a very definite addition to the resources of surgery. Its distinctive feature consists in cutting through the clavicle in an early stage, and thus obtaining access to the subclavian vein and artery, both of which are at once tied. The case to which I allude was a very formidable one, the patient being very stout, and the axilla as well as part of the pectoral region occupied by carcinomatous growth. Yet, in spite of the complications which these conditions involved, there was very little hæmorrhage. This was Mr. Treves' second case, and in both the patients have recovered, the wound having healed very quickly. The skin flaps fit far better after removal of the prominences of the scapula than they usually do after amputation at the shoulder joint, and on the whole the operation seems a less formidable procedure than the latter. It may, I should quite expect, be found in the future a very useful resource in those cases in which, after removal of the breast for cancer, the disease has returned in the axilla, and has involved the vessels and nerves. These cases are attended by most tormenting pain, and they are beyond the reach of any other operation. The incisions required for this operation not only remove the whole of the axillary space and divide the whole of the brachial plexus, but they would also allow easy access to any glands which might be enlarged in the root of the neck.

No. VI.—*Diverticula from Knee-joint.*

The occurrence of diverticula from the knee-joint bulging into the popliteal space, or of enlarged bursæ in the same position, is, I feel sure, not unfrequently a symptom of rheumatic gout, or even of true gout. Amongst my cases for diagnosis (ARCHIVES, Vol. I. p. 190) I have given a case of this kind in a lady whose father, as well as herself, had suffered from gout. I have recently been attending a gentleman in whom first one knee and then the other was attacked. The knees became slightly swollen and very stiff, but there was very little appreciable synovial effusion, and he could still walk about. The principal objective symptom was bulging in the popliteal space. Under abstinence from wine and the use of alkalies the conditions entirely disappeared. There was, however, a tendency to relapse on reverting to the same habits of diet six months later. From the behaviour of the case there could not be the slightest doubt that the knee symptoms were due to wine-drinking. They were therefore to be classed as gout rather than rheumatism. Two of the patient's uncles had suffered from chronic rheumatic disorganizing arthritis of the knee, and he himself had on one occasion had a transitory attack of free synovial effusion into one knee.

I remember well a case of this kind which was operated on, by a colleague, many years ago, at the London Hospital. It was believed to be a bursa, but it proved to have a communication with the joint itself. The patient died of suppurative synovitis. This was before the days of antiseptic surgery. With modern precautions it does not, perhaps, matter very much whether the cyst be a diverticulum or an independent bursa, since the operation will be attended by scarcely appreciable risk. I doubt, however, whether even now it is advisable to operate in these cases. The popliteal swelling, whether purely bursal or otherwise, is usually only an accompaniment of arthritis, and is by no means the cause of all the stiffness and inconvenience. Its removal would probably, in the majority of cases, effect very little for the patient's comfort. In many cases, patients go on for years

with these swellings, and find them but little impediment in walking. If operations for their removal are attempted, it is needless to say that they should be done with the strictest antiseptic precautions.

I have been induced to make the above remarks in consequence of having been consulted in the case of a gentleman who is the subject of swellings of this kind, and for whom an operation had been advised. He was about 40 years of age, and accustomed, in the pursuit of country pleasures, to take a great deal of exercise. He, however, inherited gout, and had lived freely, drinking any kind of wine that came in his way. During the last few months a swelling had appeared in his left popliteal space, and it had increased to the size of a small orange. Pressure upon it made it bulge under the inner hamstrings. I could not satisfy myself that it was in any way possible to empty it into the joint. It was quite painless, and excepting that it made the joint feel a little stiff, it did not incommode the patient in walking. During the week immediately preceding his visit to me, the commencement of a similar swelling in the opposite limb had been detected, and this had led to the proposed operation being deferred. I inquired carefully as to any symptoms of gout. Mr. C.—assured me that he had never had that disease, but added, “I have been suffering lately from neuralgic pains in my joints.” By this expression I found that he meant precisely the kind of pain which often occurs in association with tendency to gout. I advised that the operation should be deferred until trial had been made of drugs and a modified form of diet.

No. VII.—*Hydrocele of Neck treated by partial excision.*

I was led into operating on one of these congenital tumours on account of an imperfect diagnosis. The details of the operation and its result are not without interest, and may be worthy of record. A young gentleman, of 16 (Mr. E—), was brought to me with a prominent tumour in the posterior triangle of the neck, on the left side. It was

inflamed, adherent to the skin, and looked as if it had suppurated and was about to give way. The history was that it had been advancing to its present condition for about a fortnight, but that there had been enlarged glands in the neck for several years. I could not detect any glands near to it; it appeared to be one rounded cyst or abscess cavity, I could not tell which, and it dipped deeply backwards under the trapezius. With the history that something had been present for years I advised that it should not be opened, but that a cautious attempt should be made to dissect it out under an anæsthetic. In the meantime I prescribed an evaporating lotion, without having made any very definite diagnosis. I expected that it would prove to be a cyst. It was placed so far away from the neck towards the shoulder, that I confess the diagnosis of so-called hydrocele of the neck did not at the time occur to me. In the course of the operation, which was done by a free incision across the posterior triangle of the neck, I found that the tumour consisted of a series of thin walled cysts, which did not all of them communicate with each other. Some contained a serous fluid and others diluted blood. Having dissected the tumour down to the rib, and remembering that in a case in which I made a post-mortem a large portion was found in the cavity of the chest, I thought it better not to go further. I contented myself with cutting away the part of the tumour which had been laid bare, and, in doing so, of course left behind some portion of the cysts which had been opened. There was no material bleeding. A large cavity resulted, which it was impossible to fill when the edges of the skin were brought together over it. A drainage tube was inserted, and the parts covered with a compress of lint wet in spirit lotion. I may own that I was somewhat anxious about the progress of the case, fearing that the portion of the tumour which I had left behind might inflame. This, however, did not occur. The evaporating lotion was very sedulously applied, and Dr. Wreford, of the Clapham Road, under whose care the patient was, informed me afterwards that the highest temperature reached was 100° (on the second day). The wound closed soundly, and there has not been the slightest indication of increase in the por-

tion of the tumour left behind. My impression is that I adopted the only safe practice in cutting through the tumour. After I had ascertained its exact nature I felt at first some regret that I had been induced to operate, since I believe that tumours of this kind, unless they develop largely in infancy, seldom or never give any subsequent trouble. The attack of inflammation which caused the enlargement and induced the operation, might very possibly have been followed by spontaneous shrinking.

No. VIII.—*Importance of opening the Capsule in the excision of certain Tumours.*

In the excision of ordinary fatty tumours the knife should at the first stroke enter freely into the substance of the mass. They are enclosed in a cellular-tissue capsule, and this should be freely opened. If instead of doing this an attempt be made to dissect them out without wounding the capsule, the procedure will be long and tedious, whilst if the latter be only opened with sufficient freedom, they may usually be shelled out with the finger. The same remark applies to adenocenes of the breast. It is scarcely possible in either case to cut into the tumour too freely.

No. IX.—*Excision of Encysted Tumours of the Scalp.*

In the case of the common encysted tumour of the scalp the cyst itself should be freely opened from side to side. This is best done by thrusting a narrow, curved bistoury through the tumour and cutting upwards. The inexperienced are apt, as in the case of the meibomian cysts, to mistake the contents for the tumour itself, and thus leave the shell behind. I am accustomed to eject the cyst from its bed by pressing with the two thumbs, one on each side, the nail being made to dip well under the bottom of the cyst. In this way a dozen may be taken out in as many minutes. It is better not to cut the cyst into two halves, as it is easier to get it out if the posterior part remains whole. The thicker and more rigid the cyst, the more easy it is to eject by pressure. When unusually thin it may be needful to drag it out by forceps.

No. X.—*The removal of Tarsal Tumours.*

In the removal of meibomian cysts from the eyelids, but too often, insufficient care is taken as to getting away the whole of the gland. I well remember as a student being instructed to open them, and let out their contents, and then to require the patient to attend every day for a fortnight or so for the use of a probe, or it might be for a touch with caustic. The process was very tedious, and often resulted in leaving an unsatisfactory amount of permanent thickening. The error consisted in not attempting the removal of the gland itself, as well as of its contents. At Moorfields I soon found out the proper way of dealing with them. A meibomian or tarsal tumour is a retention cyst, that is, it consists of a meibomian gland which has become enlarged, has got its duct blocked, and is distended by its own secretion. It is necessary not only to evacuate the latter, but to remove the gland itself. It might be thought that this would be a troublesome matter, involving some delicacy of manipulation. The truth is, however, that these glands, even when inflamed, lie quite loosely in their bed, and are very easily ejected. All that is necessary is freedom of incision. Having everted the lid, and well exposed the tumour, I hold the lid as tightly as possible, if practicable pinching it from side to side; then with the point of a very sharp cataract knife (Beer's) I make a crucial incision through the mucous membrane, and into the cyst. One part of the incision lays open the gland in its whole length, and the other crosses it. The incision evacuates the gruel-like contents of the cyst, but leaves the gland itself behind. Still holding the lid quite firmly, I next place my thumb between the eyeball and the mucous membrane of the lid, with its nail, of course, towards the latter. A very slight squeeze of the lid now suffices to eject the entire gland. The ease with which the ejection is completed depends entirely on the freedom with which the incisions have been made. The gland should come out as a soft gelatinous body, having a smooth, slightly lobulated exterior. I have often floated these glands in water, and demonstrated to those present that what I had removed really was a distinct cyst, having a cavity and a well-defined exterior.

If a meibomian tumour be removed in this way, there is no further trouble in the treatment. The little wound fills with blood, and for a few days or a week the patient may imagine that there is as much swelling as there was before. I always take care to mention this in advance, as it may lead to disappointment. Swelling from this cause disappears, however, absolutely in about ten days, or more quickly if the patient uses ice or a cooling lotion. There is never any need, however, for the surgeon to give any further attention to the case, and he may safely tell the patient that it is not necessary to see him again. In the course of a fortnight there will not be the slightest trace of thickening left.

These meibomian tumours are often multiple. In the manner described three or four may be easily removed in as many minutes. I always decline to meddle with them unless they have attained a certain size, for if they are very small I must confess that their removal is difficult. If large enough to be conspicuous through the lid, nothing is easier than their extraction.

EPIDEMIC ECZEMA.

Two letters appeared in the *Lancet* in the beginning of August in reference to the occurrence of what was called "epidemic eczema" in the Paddington Workhouse Infirmary. Reference was also made to a similar outbreak in the Infirmary at Marylebone. The first was from Dr. Savill, the zealous and able medical officer of the infirmary, and the second from Dr. Colcott Fox. The first was a description of the cases, and the second a confirmation by a distinguished specialist of the diagnosis of the disease as "eczema." By Dr. Savill's invitation I visited the infirmary on August 14th, and saw the cases, and with his permission I purpose now to record the impressions which I formed. The epidemic, if it may be so called, has furnished material of extreme interest to myself, since it affords remarkable confirmation of two doctrines which I have long held: first, that eczema may, under certain conditions, produce a contagious *materies*; and secondly, that the distinction between the so-called pityriasis rubra and dermatitis universalis of an eczematous type is one of degree and not of kind.

Cases in the Paddington Workhouse Infirmary.

Dr. Savill showed me about fifteen cases, and in every instance the patient was senile. They were in different wards, but three or four were, in more than one instance, near together, and sometimes they occupied adjacent beds. The number of women was rather greater than that of men; but the most severe cases occurred in the latter. One patient was 82, several were above 70, and the youngest, I think, was 56. I shall not, however, attempt to anticipate the full report

of details on these matters, which no doubt Dr. Savill will himself publish, but shall content myself with the statements of my own opinions. In two of the cases which were shown me—one, a man named Harding, aged 82, who looked as if he were about to die, and had high temperatures; and in another man named Joseph Dixon, aged 63, who had normal temperatures, and who did not look specially ill, the disease differed in no respects from the most typical examples of pityriasis rubra. The dermatitis was universal, the skin was everywhere dry and red, and the epidermis was exfoliating in large flakes. There was not, and had not been, in either of these cases the slightest trace of a moist eczematous condition. The only respect in which these cases differed from the portrait of pityriasis rubra, given in the new Sydenham Society's Atlas (see Portrait xxx., a woman aged 77), was that the latter was in a more advanced condition, and had implicated the nails and had produced thicker crusts. Almost everything that I have said in the description of this portrait (see catalogue) would apply to those of Dr. Savill's patients whose names I have given, and it may be noted that in my case, as in his, the outbreak of the eruption occurred suddenly during hot summer weather. Several of the other cases which Dr. Savill showed me approached more or less closely to the type of dermatitis known as pityriasis rubra, but in none other, I think, were eczematous complications wholly absent. In one or two the eruption was all but universal, and, although erythematous and scaly in most parts, was more or less moist in a few. In more than half of the cases, however, the eruption was by no means universal, and in most of these it presented the ordinary conditions of a spreading eczema. In some its early stage was distinctly papular and lichenoid, whilst in others it was papular and erythematous only. A definite tendency to symmetry was to be observed in all cases, and in those in which the eruption was not yet universal, the explanation might easily be that they were in an early stage. In one case the patient had been the subject of chronic psoriasis for many years, and the eczema had probably received some modification from this circumstance. In two or three others the patient had for long suffered from patches of

chronic eczema on the legs. The most severe and marked cases, however, occurred in patients who asserted that until the present outbreak they had always been free from skin disease. One of them (the man Dixon already mentioned as an example of *pityriasis rubra*), admitted that he had all his life been the subject of a dry skin, and in more than one of the others, although the patient did not admit it, the skin looked like that of a slight form of congenital xeroderma. In this connection I may note that the subject of the new Sydenham Society's portrait was an old lady who had all her life had a dry, non-perspiring skin; and that there is good reason to believe that a slight general form of xeroderma, which is very common, does give liability to attacks of general dermatitis. It probably also disposes the latter to take the form of *pityriasis* rather than of eczema, and prevents the tendency to seborrhœal complications. One exception to symmetry was shown me, but it was an exception as regards severity and not as regards distribution. The patient had all her limbs covered with scattered eczematous patches, but the inflammation was far more severe, and showed far more tendency to become diffused on the left limbs. This patient was hemiplegic in her left limbs, and the explanation appeared to me to be possibly this: that she had been able with the right hand and foot to scratch and rub the paralysed limbs, while she was quite disabled from using the left for the like object.

As regards the parts affected it may be said that in those cases which were not universal the disease had begun on the usual locations for eczema, and further that the type of the dermatitis was also modified in relation to these parts. In several it had begun behind the ears, and in others it was very severe about the genitals and between the scrotum and thighs, and in the axillæ. On the parts named in several instances there was moist eczematous exudation, whilst the rest of the skin was dry. One old patient showed a universal dry seborrhœal form of *pityriasis* of the scalp. I should have thought that he had had it for years, but both Dr. Savill and the nurse supported the patient's own assertion that it was part of the present outbreak.

It will be seen, then, that there was nothing novel or excep-

tional in the type of the disease in Dr. Savill's patients. Nor was there anything in the least unusual in the fact that that type varied somewhat in different cases. The cases were examples of the form which universal dermatitis so frequently assumes in old people. Only the day before I visited the workhouse I had been called to a case of retention of urine in an old gentleman of near seventy, and found him covered with an erythematous and slightly papular eruption exactly like some of those in Dr. Savill's patients. In him it had developed quite recently, and in connection possibly with the summer weather. If Dr. Savill had had two or three cases only to show, there would have been nothing unusual in any one of them. It is the endemic prevalence of a disease not usually supposed to be contagious which constitutes the peculiar feature in his facts. It occurred to me, indeed, that after all it might be that we were hasty in assuming that the epidemic needed any special explanation, and that the occurrence might be simply a coincidence. The workhouse is one in which a great number of old people are congregated, precisely those who are likely to become the subjects of this disease. In reply to my questions, however, Dr. Savill assured me that in his experience there had never been more than two or three such cases under care at one time, and it seemed, therefore, unreasonable not to believe that the occurrence of twenty or thirty cases almost simultaneously did not imply that some common cause was at work. For myself, I do not in the least believe that this cause is to be sought for in diet, or in any poisoned state of the atmosphere. I believe that eczematous dermatitis may be set going by a great variety of causes, external heat, irritation of clothing, &c., &c., and that when once it has been originated, it always develops a material which is capable of spreading the disease on the skin of the patient in whom it has begun. The virulence of this infective material varies very much in different cases, and at different stages of the malady. That we are to seek in auto-infection the explanation of the spreading of eczema, in all cases and at all stages, but especially in its infantile and senile forms, is a doctrine I have always taken great interest in advocating. Up to the time, however, of Dr.

Savill's epidemic, the facts have been but few, and comparatively weak, which support the belief that eczema can spread by contagion from one patient to another. Herein consists, in my opinion, the chief importance of Dr. Savill's facts. All the materials favourable to an outbreak from contagion were present in his hospital. There were congregated in the wards a great number of elderly people, precisely those most liable to diffuse dermatitis. The weather, at the time the epidemic began, was hot, and the skins of most of the patients, they being confined to bed and clothed with flannel, would be frequently perspiring. The patients being, many of them, the subjects of some chest disease, it is not at all improbable but that the zealous medical officers of the institution were themselves in some instances, by their hands and stethoscopes, the means of conveying contagion. In this way I should explain the transference of the disease from one ward to another. Its spreading from patient to patient, in the same ward, may easily have been aided by the nurses. Some of the cases may have been self-originated, and in one or two the eruption may have spread from an old chronic patch of eczema long existing on the patient's own leg. That the summer weather has had something to do with it is favoured by the fact that in one of the cases I was shown I was told that the patient was admitted with the eruption already beginning. I have mentioned a case which I have myself seen quite recently, and may add that I am very frequently consulted in similar ones. Very probably it is within the experience of most practitioners that during the last few months they have had to treat cases of this description. Although the summer has been on the whole a cold one, yet there did occur in the early part of July, just when these cases were beginning, some exceedingly hot and close days. We must remember in this connection that old people rarely leave off their flannel underclothing in summer, and that they often wear it both night and day. In them, therefore, the conditions favouring the production of eczema *de novo*, and its spread by contagion, are present in excess probably of what is the case among younger members of the community. If we admit and assert

that eczematous inflammations of the skin can become contagious, there yet remains for us the problem as to what the precise vehicle of contagion or *materies morbi* is. On this point I have no facts. I have been obliged hitherto to content myself with the strong, and, I think, not unimportant assertion that, putting aside some definite exceptions, herpetic and the like, all forms of inflammatory action are productive of a form of contagious material, and tend by its means to perpetuate and extend themselves. Every year we have announced some discovery by the microscope which helps us to understand the methods of contagion. The clinical observer, however, cannot afford to wait for the construction of his pathological doctrines until the histologist has succeeded in demonstrating their truth. We hope soon, in connection with the doctrine of psorosperms, to understand the contagion of molluscum contagiosum. But it has long been impossible for any one conversant with the clinical facts to doubt the contagiousness of that malady. As a rule clinical observation goes first and histological demonstration follows afterwards. In reference to the clinical fact of the contagiousness of all forms of inflammations, my mind has long assumed an attitude of conviction, and I await with the utmost possible interest the elucidations which the subject is sure to receive from the industry and ability of the numerous observers who are now at work on it.

Cases in the Marylebone Infirmary.

On the invitation of Dr. Lunn I visited the Marylebone Sick Asylum on August 26th. Dr. Lunn himself was not at home, but his assistant, Mr. Hosegood, was kind enough to show me the cases, and to give me full information respecting them. The first case had occurred, I was told, in May; as, however, the disease is always one which is more or less prevalent, it is difficult to speak with accuracy of a first case. Ever since the case in May, the disease had, however, been prevalent; and examples of it had occurred in almost all the wards of this large asylum. I may here state that the Marylebone Workhouse Infirmary is a model of its class, that its wards are most scrupulously clean, well ventilated, and in

nowise crowded. There is nothing whatever in it, nor in the Paddington institution, to explain the development of an epidemic disease. The institutions are alike, however, in the circumstance that a large number of invalids, many of them aged, are congregated together. Mr. Hosegood showed me a list of the cases which had occurred between May and the date of my visit, and they numbered, I believe, upwards of a hundred. A not very inconsiderable number had died, but I was told that the mortality as a rule had been in connection with pre-existing disease, phthisis, &c., and not with eczema. Patients with phthisis had suffered with especial severity. This was not the first epidemic of eczema which had occurred at Marylebone. On a much smaller scale there had been a similar outbreak the previous summer. In several instances during the present summer patients had been admitted with eczema, but with these exceptions almost all the cases had occurred to patients already in the ward, and who had, previously, healthy skins. In several cases nurses and ward-servants had suffered, and one of the most severe cases I was shown had for its subject a nurse.

I will not, by giving any details of cases, anticipate the full report which I have no doubt Dr. Lunn will prepare respecting this remarkable outbreak. I will, however, briefly record my own general impressions. In doing this I may say first that the cases here were exactly like those shown me by Dr. Savill at Paddington. They were all examples of a condition with which every dermatologist is familiar, dermatitis of an eczematous type showing a tendency to spread and involve the entire surface. As at Paddington, so here, it was difficult in some cases to distinguish the disease from dermatitis universalis, or pityriasis rubra. In several, however, it was distinctly an eczema, presenting in some features the lichenoid type, and in others the papular. Only in a few, and in these chiefly on special parts, the flexures, &c., was there much evidence of tendency to exudation. Dry desquamation, with erythema, was by far the most common condition. This was usually well marked on the hands and feet, and on the soles especially, in many cases, large detached flakes of peeling epidermis, quite dry, were seen. I

did not in any instance observe the thickening and lifting up of the nails which is often a prominent feature in pityriasis rubra. In many cases the scalp had been affected, and in several the hair had fallen to a greater or less extent. In several of the most severe cases, and especially in the oldest patients, there was a history of chronic dry eczema on the legs, which had existed long prior to the diffuse outbreak. In most cases the skin had been very irritable, and the patients had lost appetite and been more or less ill, but these symptoms, I gathered, had been in ratio with the extent and severity of the skin disease, and had been caused by it. Dr. Lunn's measures of treatment appeared to have been very successful. Many of the cases had got well, and of those which I saw most were improving. As a rule, perhaps the cases were of a less severe type than the majority of cases of eczema which I am accustomed to see in private practice. The facts at this institution seem to me to favour the opinions I have already expressed in reference to those at Paddington. The cases are undoubtedly examples of diffuse eczema, and as such, of a disease concerning which I have long felt certain that it spreads by contagion on the skin of the sufferer. The novel point is that these outbreaks seem to show that the disease can become capable of infective spreading to other persons. Probably not by any means all the cases were instances of contagion; not a few may have originated spontaneously in connection with summer weather, flannel clothing, the previous existence of eczema in the legs, &c., &c. Still the number has been so great that it may be assumed to prove either the contagiousness of the malady, or the existence of some general cause. That no cause acting on the constitution, or through the blood, is at work I feel very sure, and it was impossible to discover any special source of local irritation to which the patients had been exposed. We are thrown back, then, on the supposition that some contagious element was generated in connection with the disease itself. It is only fair to admit in connection with this hypothesis that the disease has not confined itself to any one ward, but has spread throughout the whole of a large establishment. The theory which I have suggested above in

respect to Paddington must, however, be remembered here. It is quite possible that the nurses and medical officers may have been themselves inadvertently the means of carrying the contagion. No attempt at isolation of the cases had been made up to the time of my visit.

Concluding Comments.

If the opinions which I have advanced respecting the combination of causes to which "epidemics of eczema" are due be well founded, we shall soon probably hear more of them. It is not likely that these are the first instances in which the spreading of the malady amongst aged persons has been witnessed. It is due to Dr. Unna to state that he has very explicitly enunciated the doctrine of the contagiousness of eczema upon the skin of the patient, and has expressed his belief in the existence of some parasitic cause. I believe, however, that he has not been more successful than others in demonstrating the existence of any parasitic material for contagion. It is clear that this is the task which lies before future observers. Dr. Lunn and Dr. Savill have, I believe, both been at work upon it, and it is not too much to hope that before long our knowledge as to the cause of the spread of eczematous inflammation will receive important additions.

ON TAPE-WORMS AND OTHER PARASITES IN SHEEP AND RABBITS.

VERY different opinions have been recorded as to the influence of tape-worm upon the well-being of its human host. Many have denied that any harm whatever is done, and one perverse German physician goes, I think, so far as to call the parasite the "good angel of children." It has been supposed that the worm exercises a beneficial influence by increasing the peristaltic action of the bowels and preventing constipation, whilst it is denied that it produces reflex disturbances, or that it causes any appreciable loss of nutriment. It might be well to try to solve this question by observations on the lower animals. Dogs, as all know, suffer very often, and sheep, as but very few know, also suffer occasionally. In the latter instance it often happens that many lambs in the same flock are attacked together, so that a good opportunity is afforded for multiplied observations. Many years ago I knew a flock affected by tape-worm. The joints of the parasite were seen in the feces all over the field. The animals affected appeared to fail in condition, but I do not remember that any died. This spring again I have witnessed cases of the malady. Eight lambs out of a flock of sixty had died without apparent cause. They were about three months old, on a rather bare pasture, and, although healthy, not in high condition. The shepherd never observed that those about to die were ill until he found them dead or dying. Some of the finest lambs in the flock were thus suddenly taken. In one instance a lamb was found lying down and unable to rise. It was put into a barrow to be taken to the yard, but on the way had what the shepherd considered "a violent fit," threw itself out of the barrow, and died immediately. In another instance also convulsions were said to have

preceded death. At length an opportunity occurred to myself for seeing one of the patients. A very fine lamb was found lying on its side, and apparently about to die. I noticed that it had passed loose tarry motions, and that there were tape-worm joints in them. The animal having been killed, an examination was at once made, with the result of finding the upper tracts of the small intestines choked with worms. Five of the beasts, each several yards in length, lay side by side, filling the otherwise empty gut to the size of a finger. They were all anchored near the same spot, within about three feet of the stomach. The lamb was quite healthy as regards all its other viscera, and I do not think there can be any reason-doubt that the parasites were the cause of its illness. In the other instances no satisfactory autopsy was performed, but, as all died in a similar manner, it seems highly probable that all had worms. If these are trustworthy facts, it appears probable that tape-worms in lambs, when very large and numerous, may prejudice the health in some obscure way, and, without causing emaciation, may induce debility, which may end in death after a very short illness.

Exceedingly little information, either written or traditional, is extant respecting tape-worm in lambs. It is said to prevail extensively in Australia, but I have not met with a single English observer, either agricultural or professional, who even knew of its occurrence.*

The stomach of the rabbit, although in the main shaped like that of man, is more elongated, its cardiac pouch much more definite, and its body shows certain slight constrictions as if approaching the arrangement in ruminants. Internally at the cardiac end, the mucous membrane is thrown into folds, and assumes a certain degree of gophering. In the depressions thus formed the food becomes moulded into pellets exactly like green peas, which condition it loses when it passes on into the other parts. Evidently the food is somewhat delayed in this part, and is much more moistened with mucus. The stomachs of rabbits shot in the open are

* Milton in his "Lycidas" speaks of—

"As killing as the canker to the rose,

Or taint-worm [? Tape-worm] to the weaning herds that graze."

always full of chewed grass. It is in the cardiac pouch referred to that in young rabbits red oxyurides must be sought for. Turning aside the ingesta, in the mucus of the rugose parts, on careful inspection they will, in my experience, always be found. The younger the animal the fewer will be the worms. In old animals I have found them in the middle regions of the viscus, and in such numbers that they formed a red tangled mat. In young rabbits, however, I have often had to look for some time to find one or two, and until I knew exactly where to search, I used to believe that many young animals were free from them. I never at any time opened the stomach of an old rabbit without finding them, and I have done so very many times and in different seasons in order to show them to various professional companions. This summer, when I have been investigating systematically, I have never wholly missed them either in old or young. The worm is a slender red thread about half an inch in length, which soon becomes quite rigid when exposed. I have not examined any rabbit younger than about two months.

This summer, for the first time, I have repeatedly found in the colon worms of a similar character, but white and somewhat larger. They are less easy to find in this region, as the area of search is so much larger.

The small bladder-worm of the rabbit, the *Cysticercus pisiformis*, is well known. It was used by Küchenmeister and Von Siebold in their experiments on the development of tape-worm. It was given by them to dogs, and produced the *tenia serrata*. Fig. 224 in Leukhart's work shows the gradations of its progress in the assumption of the tape-worm form. The rabbit gets this bladder-worm from the eggs contained in the feces of dogs. It is easy to see how grass-feeding animals may obtain bladder-worms, since the tape-worm eggs, which produce the latter, are deposited on grass. It is not so easy to explain their acquisition of tape-worm.

Rabbits are also known to be occasionally infested by hydatids of the *cœnurus* type. The bladders are of considerable size, far larger than the *Cysticercus pisiformis* just described, and form between the muscles or under the skin.

They are large enough to be easily recognized, and the warreners are accustomed to pinch and empty them before sending the animal to market. Such rabbits are known as "bladdery." (Mr. Caleb Rose, of Swaffham, Norfolk, was the first to describe these worms.)

The rabbit is not, like the sheep, liable to develop the *cœnurus* in the brain, and it is uncertain whether this *cœnurus* of the rabbit's cellular tissue is the same as that of the sheep's brain or another species.

I have never myself in any Surrey rabbit recognized a *cœnurus*.

I first found tape-worms in wild rabbits on the evening of August 1, 1891. Two young animals (three months, perhaps) which I had shot in the same field, both of them showed these worms in considerable numbers. The two rabbits were not improbably of the same litter, and had fed on quite similar food. Both of them appeared to be healthy, but they had no internal fat. Both had their livers crammed with coccidia, and both had the red ascarides in the stomach. In one of them there was present also a small bladder-worm in the peritoneal cavity (*Cysticercus pisiformis*, with double ring of hooklets) and the white ascarides in the colon. This animal was the host therefore of no fewer than five different kinds of parasites. These rabbits were bred in a place where no water or wet land was accessible.

On the evening of August 8th I shot a young rabbit at a spot at least half a mile distant from where the two first described had been killed. It was not more than three months old, and I noticed when I picked it up that it was very thin. It had four kinds of parasites, and its liver was so full of the psorosperm nodules that very little healthy structure remained. The hepatic ducts were plugged, and the gall-bladder contained only a few drops of almost colourless bile. The four parasites mentioned were the psorosperms, tape-worms, the stomach ascarides, and a bladder-worm (*C. pisiformis*) in the peritoneum.

On August 24th I shot another young rabbit which had tape-worms. This was very near to the spot where the first two were killed which contained them. It was about the

same size, and may easily have been one of the same litter. It was in rather lean condition, but did not look in the least ill. Its liver was full of psorosperm masses, and there were no fewer than ten large tape-worms in the small gut; nine of them were just alike in size and about eleven inches long, and the tenth was not half the size. I could not observe that any of these worms were moored. They appeared to lie quite loose in the bowel. If attached they certainly lost their hold very easily.

The tape-worm of the rabbit has a thick fleshy neck and head which ends bluntly without any visible modification of form. My skill in manipulation has not enabled me to do more than make out indistinctly the suckers. There are no hooklets. On the lower part the segments become much better marked and longer, and at the same time the worm is much less thick. After increasing in width for a time the segments become narrower, until having near the end become not half the width at the middle, they finally end in one which has a blunt, rounded point. It is not improbable that this description applies to young specimens.

The tape-worm of sheep and ruminants generally is, I believe, the *tenia expansa*.

Those which I found in the sheep were much longer than any which I have seen in rabbits, but this may be mainly a question of age. I am sorry that in the sheep I did not make any measurements, nor attempt to verify the species. No book, however, which I have in my possession gives any description of *tenia expansa*.*

Respecting the psorosperm disease of the liver in rabbits, the marvel is that the animals do not show more signs of illness. All that are the subjects of these notes were shot under the hedges on summer evenings, and all appeared to consider themselves in excellent health. Their fur was sleek, and none of them showed the least tendency to pot belly. Two or three of those most severely affected were, when handled, definitely thin in the back, but this would not have been discovered unless sought for. Yet in many the liver was a mass of disease, being crammed with nodules, and having the

* I have before me Küchenmeister, Von Siebold, Cobbold, and Leukhart.

ducts plugged with long worm-like masses. It is true that the liver seems remarkably tolerant of the intruders. It does not enlarge, and it shows no traces of inflammation. I have never seen a single flake of exudation on its surface, nor the parasites become encapsuled. In cases where fluid forms round the masses, it appears to be, in part at least, bile which has been pent up. I have seen plugs in the ducts almost close to the gall-bladder, but have never seen any trace of disease in the latter itself. Authorities state that it is sometimes affected. The bile is usually very small in quantity, watery, and deficient in colour. I have never seen anything like jaundice. The small intestine, I think, more often contains collections of gas than in healthy animals. In one instance the bile itself (taken from the gall-bladder), although quite fluid, contained numberless coccidia.

Similar remarks apply to tape-worms in reference to their effect on the health of the animals they infest. There is not usually anything in the condition of the host to lead to a suspicion of its harbouring the parasite.

It is perhaps not improbable that many young rabbits die from the liver disease. It is most certain that full-grown animals show comparatively little of the disease in a recent stage, whilst it is by no means common to find evidences of its former presence. In most of the old rabbits which I have recently killed the liver at first sight appeared quite healthy, and it was only on careful search that a few small nodules the size of shot were found. If, however, the young rabbits die of the disease, my land ought soon to be depopulated, for not a single young rabbit have I shot which was not very severely affected. No dead ones are found lying about in the fields, but this may perhaps be explained by supposing that when about to die they creep into disused holes.

The discovery of coccidia free in the gall-bladder, as mentioned above, suggests the possibility that this may be the channel of their escape. The liver may possibly free itself of them by discharge into the bowel.

The problem as to from whence rabbits get the larval forms of their tape-worms is, as in the case of sheep, one of great difficulty. Probably in the instance of my own farm both

rabbits and lambs obtain them from the same source. It is in the same fields in which the lambs suffered that I have also shot the affected rabbits.

It is possible that caterpillars, slugs, earth-worms, lice, &c., may be the intermediate host.

During a recent visit to Norwich my friend Mr. Cadge was kind enough to procure me an adult rabbit shot on a neighbouring farm. Its liver contained no coccidia-masses, but there was a fine tape-worm in the small intestine, and thousands of the red thread-worm in the cardiac end of the stomach. It is clear, therefore, that our Surrey rabbits present no peculiarity in their liability to these parasites.

From a gentleman who is engaged in helminthological pursuits, M. Blanchard of Paris, to whom I have been introduced by Professor Bell at the British Museum, I have obtained some valuable information which has somewhat modified my zeal in the search for local causes of tape-worm in rabbits. He tells me that rabbits everywhere are liable to be infested by cestoid worms of several different species; and, further, that nothing whatever is at present known as to the sources from which they are obtained. They are not the same as the tape-worm of the sheep. He objects to the term *T. expansa* on the ground that it has been given to several different species. The commonest in the rabbit is, he says, the *T. pectinata*.

That tape-worms do not entail any degree of ill-health in rabbits was well proved by the examination of one which was shot on August 31st. It was full-grown, sleek and in excellent condition. I removed, however, five large tape-worms from its intestine. Its stomach, as usual (indeed invariable), showed plenty of thread-worms. As regards coccidia, it was only after much search that I found in the liver two little pin's-head nodules. Another full-grown and fat rabbit, shot a week later, had two large tape-worms, abundant thread-worms both in stomach and colon, but not a trace of psorosperms.

A little rabbit, not probably more than three months old, which was shot on August 29th, presented most peculiar and extensive conditions of disease. It had general peritonitis, and its liver was glued to the diaphragm with a thick inter-

vening layer of recent lymph. The liver was also most extensively disorganized both by psorosperms and a form of contracting inflammation which had made it hard and pale. A large part of the wall of its right cardiac ventricle was converted into a white hard fibroid material. Large portions of its lungs were quite solid from pneumonia, yet in spite of all this disease, the poor animal, which had been put up amongst turnips, had run well for its life, and was not suspected to ail anything until it was opened. It must have been about to die. Probably the peritonitis and disease of liver were secondary to the psorosperms, but this was not certain, and no explanation of the disease of the heart and lungs was offered.

On August 31st I shot three rabbits in the same hillside. No. 1 was an adult doe, in young; No. 2 was half-grown, and the third (No. 3) was nearly full-grown. No. 1 had little white specks scattered through the liver, none of them larger than small shot corns. They contained coccidia. Red ascarides were abundant in the œsophageal end of the stomach. No other parasites were found. No. 2 had many coccidean nodules in the liver, and they were of much larger size and softer than in No. 1. Some of them were arranged in lines. There were red thread-worms in the stomach, both at the œsophageal end and in the middle, and white thread-worms in the first part of colon. No. 3 had only one very small coccidean nodule in the liver, which was found only after careful search, and was not bigger than a pin's head. There were red worms in the stomach and many white ones in the colon. Attached to the mesentery beneath the liver was a bladder-worm as big as a pea. It had a crown of hooklets, and was probably a *cœnurus*. In these three animals the coccidean nodules were largest and most abundant in the youngest, the thread-worms in the stomach were most numerous in the oldest and fewest in the youngest.

The occurrence in rabbits of the various parasites which I have mentioned has been of course long well-known to those who have studied the subject. There is nothing novel in my observations. The coccidia-masses found in the liver have

of late attracted considerable attention. Respecting them, Leukhart writes : " The liver of the rabbit is not unfrequently found penetrated with white nodules, which, in more or less considerable numbers, grow gradually to the size of a hazel nut, and excite painful affections, in the course of which the animal often dies. In many warrens the disease becomes a serious epidemic, so that hardly a single healthy animal is to be found. On section of the nodules a cheesy or purulent, sometimes yellow-coloured, mass exudes, in which a microscopic examination reveals, besides cell *débris*, a countless number of the above described oval bodies. Since the same organisms are found at the same time in the gall-bladder, it may also be concluded that the nodules are in association with the bile ducts.

" They occur by no means exclusively in the rabbit's liver, but not unfrequently in other animals and in other organs, especially in and upon the intestinal epithelium."

My chief motive in recording the facts stated in the preceding pages is the hope of exciting more general interest in the subject. I have long held that part of medical education should be conducted in the farmyard and the field, and I feel strongly convinced that if the observation of trained men could be brought to bear on some of the ordinary phenomena there to be met with, much benefit would result to medical science. I am well aware that my notes are only very fragmentary, and that they lack scientific exactness. I may, however, ask attention to the following points :—

1. It is quite certain that in both sheep and rabbits it is possible for several tape-worms to be present without injury to the health.

2. It is probable, however, that in some cases tape-worms cause the death of lambs, and that they do so without inducing marasmus, but by some obscure influence on the nervous system.

3. Young animals, both in sheep and rabbits, appear to be more liable to tape-worm than old ones.

4. There is as yet not the slightest knowledge as to the source from which sheep and rabbits derive the scolices of

their tape-worms, and the subject is a most attractive one for investigation.

5. It appears certain that the little thread-worms which are present universally in the œsophageal end of the rabbit's stomach increase in number with the age of the individual, and exercise no injurious influence on its health.

6. The same statements are true of the white thread-worm which is found in the colon.

7. Respecting the psorosperm disease of the liver, it is certain that it may be present most extensively without inducing obvious derangement of health, and it is clear that it is a disease of young animals rather than of old ones.

8. It is a most interesting problem as to how the liver frees itself of these parasites. I have confirmed Leukhart's observation that the coccidia are found free in the bile of the gall-bladder, and it may be suggested as possible that, after a certain duration in the liver itself, all the coccidia pass away by this channel.

9. Although the psorosperm-disease appears not to be usually attended by derangement of general health, yet in some cases it is probably a cause of peritonitis and death.

10. There are many problems of pathology in reference to this psorosperm disease which are well worth working out. We know nothing as to their source, nor as to the period of year or character of season in which they are most prevalent. Nor do we know anything as to the method of recovery, nor indeed if such an event be possible.

11. The relation of the parasites to the ducts and their influence on the nutrition of the liver have been well worked out by Dr. Sheridan Delépine * in his admirable paper in the Transactions of the Pathological Society. Most of his statements, especially those as to the absence of any evidence of injurious influence even in advanced cases, I can fully confirm. Dr. Delépine's observations appear to have been made on tame rabbits, and he quotes from Dr. Brown

* Dr. Delépine's paper comprises a bibliography of the subject, and does ample justice to previous writers, a task which I have not attempted.

Sequard the opinion that wild animals are comparatively exempt.* This opinion my experience wholly controverts.

* I think it not improbable that Dr. Brown Sequard examined only adult rabbits. Until the present summer, I had myself overlooked the disease, no doubt because I shot only full-grown animals. This year I have purposely procured young ones for examination.

POSTSCRIPT.

A gentleman who has a rabbit-warren in Wiltshire, tells me that his rabbits have this spring been suffering very much from what he calls "spotted liver." A great many have died, and he believes that his keeper has picked up as many as a hundred. He says that his keeper considers that the epidemic is now passing over, and he attributed it to the wet spring.

INFECTIVE ANGEIOMA, OR NÆVUS-LUPUS.

MR. WARREN TAY has been good enough to send me another very interesting illustration of this singular condition. It is the fourth typical example of the condition which I have now seen. In the note which accompanied the patient, Mr. Tay described the skin as being specked over with minute grains of cayenne pepper, which, however, were not perceptible to the touch.* The patient was a girl of about twelve, a Miss D——, from Sevenoaks. It was her right leg which was chiefly affected, the condition extending continuously from the heel to the knee, and reappearing in a separate patch on the front of the thigh about a hand's-breadth above the joint. The back of the limb was covered over with minute dots of a deep red or almost purplish tint. These evidently consisted of small thrombosed tufts of vessels, for no amount of pressure caused the colour to alter. These little spots varied in size, but were all very small indeed. They were closely placed, but for the most part discontinuous with each other, and not arranged in rings or in any other definite kind of grouping. They were most numerous on the lower part of the calf where the disease had first commenced; but they were present also over almost the whole of the front of the leg. There was no evidence of their having undergone any retrogressive changes, and not the slightest trace of a scar could be

* Mr. Tay's note to me very tersely drew attention to the principal features of the spots in the following terms:—

DEAR MR. HUTCHINSON,—A girl will be brought to see you probably on Monday morning. Over the left thigh are numerous spots like grains of cayenne pepper. They do not disappear on pressure. What is the explanation? Granted capillaries, they should empty. If thrombosed, how can they persist as they seem to do?—I am, yours truly, WARREN TAY.

PLATE IX.

INFECTIVE ANGEIOMA. NÆVUS-LUPUS.

THIS portrait (which has been given previously in 'Archives,' vol. i.) is here re-introduced in order to illustrate a case at page 166. It represents the arm of a young lady, 15 years of age, in whom from infancy the conditions displayed had been gradually spreading. They were exactly similar to those present in the case referred to. It will be seen that some delicate rings are present as low down as the elbow, passing towards the forearm. The enlarged capillaries, which constituted the chief features of the disease, could in part be emptied by pressure, but there were many minute tufts, "the cayenne pepper grains," which were not in the least influenced by it.



detected. The patch above the knee was of quite recent development, and was exactly like the others, but the dots which composed it were not nearly so closely placed. The patient's mother fancied that she had detected two little spots on the front of the other leg, but about the reality of these I may confess that I felt some doubt. The patient had no nævi elsewhere, nor any skin disease; with the exception of a brown mole, about the size of a half-crown, on the right side of her abdomen. This mole was without thickening, and there was no trace of vascularity about it. No nævus or port-wine stain had been observed on the girl's leg at birth, and it was not till she was two years old that the conditions, so conspicuous at present, were noticed. The mother described the first stage as a small group of spots on the back of the calf. These gradually spread up and down the knee, until the conditions now present were produced. The disease had been so steadily progressive in spite of remedies, that the child's mother expressed her anxiety lest it should in time cover the whole body.

My patient was shown before a meeting of the Dermatological Society in July, 1891, at which date her portrait was taken. The portrait is in the collection of the Royal College of Surgeons.

A feature of difference from other cases of this malady was the only slight tendency to form rings or crescents. This tendency was very marked both in Dr. Lassar's case and in my own. The absence of any congenital condition of port-wine stain must also be kept in mind.

When I speak of this case as being only the fourth which I have seen, I refer to uncomplicated and closely similar cases. As a part of the phenomena of Lupus Lymphaticus, or Infective Lymph angeioma, the cayenne pepper grains are constantly present, so also do they occur as part of certain forms of portwine-stain. In the present group, however, I place only cases in which these spots were the only condition present, and in which, unlike portwine-stain, they spread serpigiously after the manner of lupus. They are of course allied on the one hand to non-infective nævus, and on the other to the infective lupus-lymphaticus. Nevertheless they are different

from both, and although their relationships should be carefully recognized they must constitute a separate group.

The cases which I count are (1) my own published in *Illustrations of Clinical Surgery*, and again in *ARCHIVES*, Plate IX. Vol. I.; (2) Dr. Allan Jamieson's mentioned in *ARCHIVES*, Vol. II. page 70, and (3) Dr. Lassar's, of which a model was shown at Berlin last year, and is described in *ARCHIVES*, Vol. II, page 111.

Although I have twice published the portrait of my own first case, I now reproduce it for the convenience of my readers. It is an excellent type-illustration of the group, being almost exactly like the present one, and not to be in any particular distinguished from Dr. Lassar's. Those who possess the portrait already may possibly be glad to detach this duplicate and mount it for the portfolio or for class-teaching.*

* For the full use of pictorial illustrations they ought always to be possessed in duplicate. One should be bound up with the printed context, and the other mounted and placed in the portfolio in classified juxtaposition with others of a similar kind. I am myself always doubly grateful to my friends, who send me copies of their illustrated monographs, if they send me duplicate plates.

USES OF THE ACID NITRATE OF MERCURY AS A CAUSTIC.

I HAVE been asked by a correspondent writing from Australia to give the details of the application of the acid nitrate of mercury, to which brief reference is so often made in the ARCHIVES. I gladly take an opportunity of doing so, because I believe that to the very liberal use of this valuable agent I owe much success in cases which had proved disappointing under other measures. I use it for nearly all unhealthy-looking sores, and wherever an inflammatory process was thought to be likely to prove infective to other parts. Thus boils, inflamed acne, almost all forms of tertiary syphilitic disease of skin or mucous membrane, most cases of common lupus, as well as all varieties and degrees of phagedænic action, come under its influence. Where it is desirable to produce a considerable destruction of tissue, as in cases of cancer of the skin, then I prefer either the actual cautery or, still better, the chloride of zinc paste. For nævi, unless very small, I prefer the actual cautery. The solution of the acid nitrate of mercury, a syrupy fluid prepared according to the British pharmacopœia, and renewed once in every two months or so, always stands on my window-table. With it is a tray of glass brushes of various sizes, and some rolls of the thickest blotting-paper. The brush used should be pointed in cases in which it is desired to pencil out dilated blood vessels, or to touch small spots such as those of acne. In these cases a very minute quantity of the caustic is all that is desirable, and the blotting-paper should be applied to the part after half or a quarter of a minute, according to the effect it is wished to produce. If by accident a larger quantity has been applied than was intended, or there has been

any running of the acid, an instant application of the blotting paper will prevent any ill consequences. I wish to make it particularly clear that I am in the habit of using the acid with a very light hand indeed when it is employed for such diseases as acne of the face and the prevention of scar is important. For I have more than once had patients who had been treated by my friends according to what was supposed to be my plan, who complained bitterly of the scars which had been left. I always explain to patients beforehand that small scars are inevitable, and I believe I generally succeed in leaving no larger ones than had been expected. The efficacy of the treatment in cases of acne, if the patient will attend regularly once a fortnight for three or four times, is often very remarkable.

For large ulcers, for patches of lupus, and for the tubercles and patches of syphilitic lupus, a good broad-ended brush is used, and the acid freely applied. Under these circumstances it is allowed to have two or three minutes to act on the part before blotting-paper is used; or if the structures be thick, it may be painted over several times at intervals of a few minutes. In many cases I have known the acid thus used cure, at a single application, spreading patches of syphilitic lupus which had long resisted internal treatment.

In using the acid inside the mouth, for sores on the tongue, or on the cheek, or in the throat, I employ a large, broad brush with a long handle, and always have ready in the left hand for immediate use a roll of blotting-paper, long enough to easily touch the pharynx. Sometimes, but not very often, it is necessary to avail oneself of the hand of an assistant to depress the tongue or hold the lips out of the way. The part to be touched should be always first dried by means of the blotting-paper, and with certain parts, as for instance the sides of the tongue, it is a convenient plan to hold the paper under the sore to be touched, before applying the brush. In this way all risk of the acid running may be obviated. It may be asked, Is not this caustic treatment a very painful one? and the reply must be that when it is necessary to use it freely it is painful. It will cause pain which will last twelve or twenty-four hours, and will in

some instances even give the patient a bad night. I have, however, very rarely thought it necessary to order an opiate, and if the patient is fairly informed beforehand that pain must be expected, there is rarely any complaint. Every now and then I have been told that certain patients have avoided my consulting-room for fear of having caustic applied, but to set against these there are many who are only too well pleased to have got rid of a troublesome malady at the expense only of a few hours' pain.

DOCTRINAL PATHOLOGY.

(Continued from page 70.)

IT is a question of much practical importance whether the stage and vigour of a specific fever in an infectant makes any difference to the infected. If syphilis be contracted from a person who has had no treatment, and in whom the disease is recent and well-developed, will it be the same thing as if taken from one who has had much specific treatment, and in whom the malady is almost suppressed? Are small-pox, measles, scarlet fever, and the like, of the same degree of severity when received by a patient who is just convalescent, as when taken from one at the height of the malady. We believe that the specific animal poisons are always the same, and that quantity makes little or no difference, but it is yet possible that they may, within certain limits, vary in quality or degree of vigour. We know that the seeds of plants do vary a little in vigour, though they of course produce the same species. Gardeners and farmers are careful to select their seed from good strong plants.

An observant lady assured me, "I never take cold, but if any one else has one I am sure to catch it." This expression very exactly illustrates my own theory of catarrhal maladies. They are capable of origination by influences brought to bear on the nervous system and their secretions become infectious. Thus many "colds" begin from exposure to draughts or damp, and many others from personal infection. No distinction is to be drawn between the two; they are as a rule exactly alike. Those which arise from infection may, however, be developed into especial virulence, and may then prevail as epidemics, which are attended by more or less of individuality of type. Probably infection is the cause of by far the greater number of common colds. Infection may be

believed to be always at work when a cold goes through the family.

We frequently see illustrations of the difficulty with which the cryptogams grow on certain skins. One patient will come covered with the brown patches of pityriasis versicolor, so that there is scarcely any healthy skin left, and another will show only two or three spots and yet these may have been present for years. It is the same with ringworm and with favus. I have seen ringworm of the finger-nail persisting, in spite of all treatment, for years together, and yet no other nail becoming affected. A remarkable instance of this local limitation through long periods came under my notice in the person of a young gentleman who consulted me for syphilis. Having made him strip, I found that he had a few brownish patches of pityriasis versicolor on one shoulder, and another little group of the same just over the iliac crest. On my taking notice of the latter, he said, "Oh, these, I think, are a birth-mark; I have had them as long as I can remember, and they never change." The rest of his skin was remarkably white and clean. I scraped some scales from the little patch which he considered a birth-mark, and on putting them under the microscope found them full of spores and threads of fungus.

Facts illustrating what may be called individual susceptibility to the inroads of parasitic fungi may also often be observed in vegetables. Plants of the same species, and growing apparently under precisely similar conditions, will suffer in very various degrees of severity. One plant will show only a few isolated patches when its neighbour is covered.

In former numbers of the ARCHIVES I have expressed the opinion that those who take small-pox within short periods of successful vaccination, and those who are easily susceptible of re-vaccination after short intervals, are usually the subjects of idiosyncrasy, and might very possibly not be protected even by small-pox itself. A correspondent has been kind enough to send me the following fact which bears out this view. A woman, about 35 years of age, died of small-pox

during an epidemic. She had been vaccinated in early life successfully, and at a late period (exact age not stated) had suffered from small-pox, which had left her at the time of her second attack deeply scarred. It would appear that there are those whom previous attacks of the specific fevers do not protect, or at any rate only for short periods. It is the same with measles and scarlet fever, and also with syphilis. Second attacks of syphilis are, as all now know well, not uncommon. I once attended a gentleman for a second attack of syphilis who had had also two attacks of small-pox. Such cases suggest the possibility that there may be conditions of organization which entail special liability to all the specific animal poisons.

Professor Billroth has recently published a most interesting Essay on the mutual influence of vegetable and animal cells.* In it he deals with the various methods in which parasitic vegetable organisms disturb the course of normal nutrition in animal bodies. He shows that in some cases the result is an overgrowth, and in others an inflammation. The growth of warts in the middle of the dorsum of the tongue which occurs every now and then as part of the phenomena of secondary syphilis, has long impressed me as a most conclusive instance of a specific poison producing overgrowth rather than inflammation.

As illustrating the tendency to which I refer, I may mention a case recently shown me by Dr. Pringle. A man who was covered with an eruption of syphilitic psoriasis, had upon each nipple a mass of papillary growth as large as a small hazel-nut. These growths were pedunculated and almost dry, not in the least resembling the ordinary condition of condyloma. There was a slight tendency to the latter at his anus.

The laws of inheritance in respect to psoriasis appear to be very peculiar. Now and then we see two members of the same family (that is, brothers or sisters) suffering from it; but much more usually the patient will state that he is the only one affected. It is, in my experience, exceedingly rare to

* This Essay will very shortly be published by the New Sydenham Society.

see more than two in the same family the subjects of it. Yet almost always there is a history of its occurrence in predecessors or collateral relatives. It is difficult to resist the evidence of facts of the latter class and to refuse to believe that the disease may be transmitted, or more correctly that the peculiarities of skin which tend to its production are prone to prevail in families. Yet it would seem that there is no tendency to intensification of transmission, whether by inter-marriage or other influences. The disease does not get worse in inheritance, nor does it prevail more freely. The facts are quite different from those as to Ichthyosis. In the latter, one half of the family (*i.e.*, of the brothers and sisters) almost invariably suffer together. Nothing is more rare than to see a wholly isolated case. At the same time it is exceptional to be able to prove the occurrence of the disease in previous generations. So strongly is this contrast between the two maladies marked, that I have (guided also by some other facts) been inclined to believe that whenever the state of skin giving proclivity to psoriasis becomes intensified so as to produce a family form, the result is not psoriasis, but ichthyosis.

An instance of the occurrence of psoriasis as the result of inheritance came under my notice the other day. A gentleman who during boyhood and youth I had frequently treated, but without complete cure, at length married. I have just had his second child, a healthy little girl of four, brought to me on account of development of the same disease. It does not, however, assume in the child precisely the same features as in her father. The patches are but slightly scaly, and look more like dry eczema than psoriasis. They have come out with tolerable symmetry rather rapidly during the last few weeks (March, 1891), and affect her limbs and trunk.*

In studying the nature of the diffuse dermatitis known as pityriasis rubra, it is very desirable to note carefully the modes of its beginning and extension. We want to know whether it develops from separate centres, or whether its

* When I saw the subject of this case a second time, a fortnight later, the spots had become more scaly and more definitely psoriasis. She was taking liquor sodæ arseniatis in two-minum doses without disagreement.

border is usually serpiginous. Detailed observations on this point would help us much to decide whether the inflammation is neurotic, or whether it is a process of self-infection, "contagion of continuity." We well know the manner in which erysipelas spreads over the whole body, passing down the limbs to the very ends of the digits. It is important to determine whether anything similar to this occurs in pityriasis rubra. If it does, it clearly differs from erysipelas in two points—first, that its extension is always symmetrical, and next that whilst extending it does not leave the parts first attacked. The cases to which I have referred in the article on Epidemic Eczema certainly support the belief that the dermatitis in question spreads by a process of infection.

Mr. George Mackenzie has mentioned to me two different instances in which, after a blow on the testis, an attack of mumps followed. In one case it was a blow from a cricket-ball. Both the patients were young men, and in neither instance was it believed that there had been exposure to the contagion of mumps. It is, of course, well known that acute orchitis often follows mumps, but I was not aware of any instances of the converse until these cases were told to me. It is difficult to suggest any explanation, unless it be the fact that the parotid gland and the testis develop, when inflamed, elements which are mutually infective.

Of all the specific diseases which observe stages, hydrophobia probably presents us with the most startling deviations from rule. It is well known that the interval between the bite and the first occurrence of symptoms may vary from a few weeks to one or two years. The duration of the case after once symptoms have occurred is, however, much less variable. Especially in the case of the dog, it is very unusual that life is prolonged many days after the tendency to bite is shown. Usually the animal becomes very obviously ill soon after he has bitten any one, if, indeed, he were not so before. I find, however, an exception to this statement in the *Edinburgh Medical Journal* for 1808. A case is there mentioned in which a dog bit a man and caused his death by acute hydrophobia, although at the time of the bite and for ten days afterwards the animal showed no signs of illness.

MISCELLANEOUS.

No. XXXV.—*On the Management of Sore Tongues in Smokers who have had Syphilis.*

It is sometimes vaunted by the advocates of the inunction treatment of syphilis that it will cure the chronic ulcers in the tongue which are often so troublesome in the later stages. For myself I am quite willing to admit that neither the iodides nor mercury given internally will effect this result if the patient continues to smoke. I know of nothing that will. At the same time I do not believe that either inunction or the vapour bath are any better than internal administration. The real treatment is abstinence from smoking, and repeated cauterizations with the acid nitrate of mercury. I admit that specifics in all forms often do good for a time, but they do not cure, and if the patient continues to smoke the tongue is sure to relapse. A remarkable instance in proof of this has just come under my notice. Mr. L——, who is one of three whom I have seen on the same morning with almost exactly similar tongues and with nearly parallel histories, tells me that he has been at Aix nine times, and has altogether spent a year there. He always had rubbings, and always found his tongue the better for them. It was for the tongue that he went. His syphilis was fifteen years ago. He has, with intermissions, smoked all the time. He finally comes to me with his tongue as bad as ever it was. It is, indeed, the worst of the three to which I have just referred. The other two patients have had only internal treatment (not under my own care). To all three patients I have said and done the same things. In the first place I have said to all, "You must not smoke again; as you hope to escape cancer you must shun the pipe." In the

next place, I have carefully painted all the ulcers with the caustic solution of the acid nitrate. I have enjoined upon all the avoidance of effervescing drinks, cheese, and sweet fruits.

The tongues to which the above observations refer, showed patches destitute of papillæ, leucomatous streaks and abrasions at the borders. In all three cases there were leucomatous streaks in the cheek pouches as well. The conditions are to a considerable extent incurable. When the papillæ have once been destroyed they rarely grow again. The tongues must remain permanently more or less bald. The aim of treatment is to prevent the formation of ulcers and get rid of all soreness. Restoration to a state of integrity is impossible. I should regard it as almost a matter of certainty in each of the three patients that if smoking be persisted in cancer will sooner or later result.

No. XXXVI.—*High temperatures in the Secondary Stage of Syphilis.*

I have recently been consulted in a somewhat remarkable case of high temperatures in syphilis. I did not actually see the patient, for although it was much wished that I should do so, I repeatedly excused myself (as he lived at a considerable distance from London) on the plea that whether I visited him or not I should have but one remedy, and that was mercury. The diagnosis of the disease was fully made out before I was consulted, the chancre being still present and the body covered with rash. On August 13th the evening temperature was 103°; morning, 101°. On the 15th the same. On the 17th, 104° in the evening. On the 18th, 103° in the evening. On the 19th, again 104°. Up to this date the solution of the bichloride of mercury in drachm doses was all that had been used. I advised the immediate employment of grey powder in doses of 1½ gr. every three hours, until the gums were touched. Under this remedy the chancre soon ceased to be painful, the rash began to recede, and the temperatures became normal. The patient, who had of course been confined to bed during the period of high fever, was able, ten days after beginning my prescription,

to travel up to town to see me, and was then feeling quite comfortable. His gums had been slightly touched. Nothing could possibly have been more definite than the influence of the specific.

No. XXXVII.—*Pain in the Occiput as a result of Periostitis of the Jaw.*

A patient suffering from periostitis of the lower jaw after extraction of a wisdom tooth has now considerable swelling, threatening abscess, and much stiffness. He complains of the curious symptoms of a severe pain in the back of his occiput just to right of tubercle. It is chiefly caused by swallowing, and almost prevents his drinking. It is a month since the tooth was taken out, and the swelling is considerable.

No. XXXVIII.—*Disappearance of the Superficial Veins in extreme Anæmia.*

A surgeon who has repeatedly been in conditions of extreme anæmia from most alarming losses of blood from the stomach, remarked to me as he was just recovering from one of the attacks, "I am begining to see my veins again." He told me that when he was bloodless he could scarcely trace the large veins on the backs of his hands; they assumed the condition of pale cords; but as his blood was renewed they came out again into prominence as cords of a purple colour. I have seldom seen a man so deathly pale as this patient had been on several occasions. (He has since died in another attack.)

No. XXXIX.—*Herpes after Arsenic.*

On December 16th I prescribed for a Japanese gentleman, aged thirty, who was the subject of a very peculiar skin disease. My prescription comprised, together with mercury and iodides, three minims of Pearson's solution of arsenic. He came to me a fortnight later with a crop of shingles on his right hip. The chief group of vesicles was just over the iliac

crest, but he complained of pain in the skin as far forwards as the pubes.

No. XL.—*Memoranda on the Feces.*

Differences in colour, &c., of the feces are often very misleading both to patients and practitioners. Very insufficient allowance is usually made for the direct influence of articles of diet. I have therefore put together the following memoranda in the hope that they may be useful to some of my readers. They contain of course nothing original :—

The feces are the remains of the food taken, modified by partial digestion and by the secretions which have been added.

Thus the colour of the foods taken may often give the colour of the feces. Blackberries, whortleberries, and many other fruits invariably give a dark tint. So also claret and red wines in general. Iron, as is well known, may make the motions black.

Carbonate of magnesia may make the feces white.

A milk diet will give white or pale motions, so also, unless counteracted by other articles of food, may the use of white wines, champagne, &c., in the place of red ones. Self-observant patients are often deceived into thinking themselves out of health by forgetting some change of diet of this kind.

All sorts of green food, salads, spinach, cabbage, French beans, &c., tend to make the motions loose, and may make them definitely green. In children this may be so marked as to lead to the suspicion of bile disturbance.

Different purgatives may also modify the colour of the stool.

Thus it may be broadly stated that the colour of the stools, unless carefully estimated, is a very fallacious sign.

A CATECHISM OF SURGERY; WITH CASES FOR DIAGNOSIS.

No. LXXXIII.—*A Medico-Legal Case.*

I quote the following case from the Transactions of the Provincial Medical Association of 1844.

Were the inferences justified by the facts? How would you name the excrescences described, and what is the probable nature of the bodies so called? Is ossification of the falx, &c., a condition likely to have caused the symptoms described?

A labourer, aged 50, who had suffered from headache, &c., ate a hearty supper and went to bed. He was found insensible in the morning, and died at noon. In consequence of suspicion that his wife had poisoned him, the body was exhumed. The following is an extract from the account of the autopsy published by the surgeon who performed it:—

“On removing the cranium there were found very extensive and strong adhesions of the dura mater to the skull. There were also several semi-ossified excrescences, about the size of peas, on that part of the dura mater corresponding with the left parietal bone; and these little tumours were imbedded in indentations of the bone, which they had formed by pressure and consequent absorption. The skull was not carious, but in two places it was nearly perforated by the cavities in it produced by the tumours. The falx was partially ossified, and in the longitudinal sinus there were several patches of ossified matter; in other respects the brain was healthy.

“The result of this examination tended to exculpate the woman from the suspicions which had been excited, by satisfactorily demonstrating the existence of such disease in the membranes of the brain as would not only account for the

symptoms during life, but also for the suddenness of the man's death."

ANSWER.

The "excrescences" which had indented the bone were no doubt Pacchionian bodies, and, as such, are to be expected in the heads of almost all adults. Ossified plates in the falx and dura mater are common conditions in persons past middle-age, and probably do not, as a rule, cause symptoms. The older pathologists held that they often caused headaches, epilepsy, stupor, &c., but it is doubtful whether they are productive of inconvenience. Whilst admitting the possibility that these plates may have had something to say to the man's previous liability to headache, it may be confidently asserted that nothing which is recorded in any way explains the fatal coma. The want of pathological knowledge on the part of the physician may have been the means of permitting a murderess to escape.

The Pacchionian bodies (not glands) are never present at birth, but may usually be found as early as the seventh month. They increase in size and number as age advances. They are possibly, making allowance for difference of structure, in the same relation to the dura mater that molluscum fibrosum tumours are to the skin. They do not occur in animals.

No. LXXXIV.—*On Buboes in Syphilis.*

1. Is the popular rule that the bubo of an infecting chancre consists of hard isolated glands, which do not inflame nor suppurate, a sound one?
2. What term is usually applied to the bubo which attends the infecting chancre?
3. Are infecting chancres always attended by enlargement of glands?

ANSWERS.

1. In a general way it is, but there are frequent exceptions. It is not at all uncommon to have a suppurated bubo, or even one in each groin, in a case in which yet constitutional symptoms of syphilis are present.
2. It is known as the "Bullet Bubo"; this term being

applicable to the hardness, roundness, and small size of the glands which are affected.

3. The reply to this question should be that not very infrequently there is no appreciable implication of the lymphatics. In the case of the groin, it may be said that in most persons, even in health, careful examination will succeed in detecting lymphatics which are more or less hard. So also in the case of the axilla, the careful search, if the patient be moderately thin, will usually succeed in detecting some of the glands and eliciting some expression of tenderness on the part of the patient. Not only in chancres on the finger, but in cases of cancer of the breast, it is by no means always easy to feel sure as to whether the axillary glands are specifically affected or not. We may say, then, that slight enlargements whether in the groin or the armpit, and whether in reference to cancer or syphilis, must not be allowed to have much importance attached them in reference to diagnosis.

No. LXXXV.—*Filaria-Disease.*

1. With what diseases has the *Filaria sanguinis hominis* been supposed to be associated?
2. Give your reasons for and against the belief that it is the cause of Tropical Elephantiasis?
3. What is their probable relation to the disease?
4. By what means is the filaria supposed to gain access to the human body?
5. In what parts is it found?
6. What peculiarity of its habits long prevented its discovery in the blood?
7. Of what diseases is it probably the efficient cause?

ANSWERS.

1. With endemic hæmaturia and chyluria, and also with lymph-scrutum, lymph-varix, and elephantiasis.
2. The reasons for associating elephantiasis with the filaria are, that the worm has been often found obstructing the lymph-channels and that the disease is common in countries where the parasite abounds. The reasons against are, that precisely similar forms of elephantiasis occur in temperate

countries where the filaria is not met with, and that they run the same course; that the elephantoid hypertrophy may be strictly limited to one leg; that the presence of the filaria in the blood is very common in those who show no tendency to elephantiasis. That it is rare to find a patient simultaneously suffering from elephantiasis and hæmaturia.

3. The filaria is probably related to elephantiasis as a cause of aggravations and complications. More especially may it be suspected of causing lymph-tumours.

4. The filaria has been supposed to enter the skin during bathing, but it may also be taken into the stomach in drinking water.

5. It is usually found in greatest number in the lymphatics, but is met with also in the blood.

6. The adult worm passes into the blood during the sleep of the patient only, and is therefore seldom found in the daytime, even in cases in which it is abundant in the night.

7. There is great probability in the belief that it is the efficient cause of endemic hæmaturia and chyluria.

No. LXXXVI.—*Tape-worms.*

1. Which is the more common tape-worm in man, *Tænia mediocanellata* or *T. solium*?

2. From what kind of flesh-food are these worms severally derived?

3. What races are exempt from tape-worm?

4. In what countries is tape-worm very common?

5. What races are free from *Tænia solium*?

6. Are all tape-worms usually solitary?

7. What is meant by the expression "Measly pork"?

8. It is said that arrangements have been made in the United States for the microscopic examination of parts of all pigs slaughtered for food. What is the object of such a precaution, and what muscle ought specially to be examined?

ANSWERS.

1. It was formerly supposed that *T. solium* was the more common, but it is now believed that the reverse is the case.

2. *T. mediocanellata* exists as a bladder-worm in the flesh of oxen, *T. solium* in that of swine.

3. The Hindoos, and all strictly vegetable-feeding races, are believed to be exempt from tape-worm. Iceland and Greenland are said to be exempt.

4. It is said that all Abyssinians suffer, and that the periodic use of kousso is habitual. Tape-worms are also common in North Africa and in Syria, and also in Russia. The different worms are met with in different regions, according to the dietetic habits of the people.

5. The Jews and Mussulmen, who eat no pork, are exempt from *Tænia solium*, but may suffer from *mediocanellata*.

6. *T. solium* is usually solitary, but *mediocanellata* may be found in numbers. Opinions differ on the point.

7. Pork in the flesh of which the minute encapsuled bladder-worms of *Tænia solium* are present.

8. The object is the prevention, not of tape-worms, but of trichina-disease. The worm of the latter is microscopic. The *psoas* muscle is the test part.

No. LXXXVII.—*Tape-worms.*

1. It has been observed that *Tænia solium* becomes rare after an outbreak of Trichinosis. How may such a fact be explained?

2. How may the production of tape-worms in all forms be prevented?

3. What form of food is the source of the larval form of *Bothriocephalus latus*?

4. Where is the *Bothriocephalus* chiefly met with?

5. Are any herbivorous mammals liable to tape-worm, and, if so, how do they obtain the larva?

ANSWERS.

1. An epidemic of trichina has the effect of alarming the public, and leading to greater care both in the inspection and the cooking of the flesh of pigs. The same means which prevent trichina are efficient also against tape-worm, although the two have no relationship.

2. Thorough cooking of the food is always efficient.

3. The asexual form of *Bothriocephalus latus* is found in fish (both salt and fresh water).

4. *Bothriocephalus* is met with chiefly on the shores of the Gulf of Bothnia, but occurs also in Finland, Russia, and Switzerland. Near to certain of the Swiss lakes it is very prevalent * (Neuchatel, Geneva, &c.).

5. Sheep, especially lambs, sometimes suffer from tape-worm (*Tania expansa*), and rabbits also. Not known.

No. LXXXVIII.—*On Tape-worms.*

1. What are the five stages observed in the development of a tape-worm?

2. Where is the embryo of the *Tania cucumerina* to be sought for?

3. Can *Tania solium* live in the intestines of herbivora?

4. What is the name of the most common tape-worm in the herbivora?

5. What is the general distinction between the tape-worms of the carnivora and those of the herbivora?

6. By what name is *Tania mediocanellata* now more commonly known?

7. Are the species of tape-worm numerous?

ANSWERS.

1. (1) The six-hooked embryo (directly from the tape-worm egg). (2) The bladder-worm or cysticercus. (3) The tape-worm-head without joints, or Scolex (the bladder having been lost). (4) The proper chain-worm (Strobile); and (5), finally, the isolated sexual animal or proglottis (containing the six-hooked embryo).

2. In the dog-louse (*Trichodectes Canis*).

3. The *Tania solium* may be experimentally developed in the intestine of the rabbit.

4. *Tania expansa* is the name given to the tape-worm of the sheep and of herbivora in general, but it is probable

* Hirsch's "Handbook of Geographical Pathology," translated by the New Sydenham Society, gives full information on all questions relating to the endemic prevalence of these parasites.

that it has been applied to a group which comprises several different species.

5. Most of the *tænia* of carnivora have hooklets ("armature"), whilst those of herbivora are unarmed.

6. It is now generally designated *T. saginata* (the thick, or fat tape-worm).

7. The Zoological Class Cestoda (Van Beneden) comprises seven families, of which that of *Tænia* is the seventh. Of *Tæniæ* no fewer than 350 species have been described. Of these, however, only twelve have been found in man, and only four of these are at all common.

No. LXXXIX.—*Helminthology*.

1. What is the meaning of the words "cestoid," "nematoid," and "tremadode," and to what groups of parasites are they applied?

2. What is the etymological and what the zoological meaning of the words "scolex" and "pro-scolex"?

ANSWERS.

1. Cestoid means girdle-like, and is applied to all tape-worms; nematoid means thread-like, and is applied to thread-worms of the oxyuris and trichina type; tremadode is a name applied to the flukes, and designates certain depressions, pores, or openings (*trema*, a cavity) in the worm which serve as organs of adhesion.

2. The Greek word means simply a worm.* By modern writers on worms the word is used somewhat loosely, by some being applied to the entire tape-worm. The best authorities, however, now apply it to that stage of the cysticercus or bladder-worm which immediately precedes the development of joints. Thus the so-called echinococci of the common hydatid cyst are scolices of a dog's tape-worm. The cysticercus cellulosæ of man is a scolex, and the little rice-like bodies seen in the hydatid of a sheep's brain are scolices. Some would refuse the term to a cysti-

* A work on Worms, which is before me, has a Glossary of Terms, and defines scolex briefly as "a word used to designate a phase of development of the cestoid entozoa." Much good may such definitions do the reader!

cercus until in the process of development the bladder end had shrivelled up. To the conditions immediately preceding the scolex stage the term pro-scolex is applicable.

No. XC.—*The Parasites of Herbivora.*

1. Of what tape-worm is the brain-hydatid of the sheep the scolex?
2. If lambs are fed with the embryos of *Tænia cœnurus*, what happens?
3. What is a Fluke?
4. What is the disease in the sheep called which is caused by the brain hydatid?
5. What are its symptoms?
6. What is the Rot in sheep, and what are its symptoms?
7. Is the mutton of Rotten sheep unwholesome?

ANSWERS.

1. The *Tænia cœnurus* of the dog.
2. The embryos will bore through various organs and tissues in search of their resting-place, the brain. They leave behind them little cysts in their track. (See Leukhart, fig. 46, page 69.)
3. The flukes, or tremadode worms, have soft, rounded, or flattened bodies, which contain the viscus in their parenchyma. They seldom assume any great length. They pass through a most extraordinary cycle of life-development, occupying provisionally the bodies of certain non-vertebrates, living free either in water or dewy moisture, and finding a final home suited to full development in the bodies of vertebrates. They all possess at a certain stage an alimentary tube and sexual organs. Some are hermaphrodite. They have also a water vascular or excretory system.
4. Sheep affected by brain hydatids are said to be giddy.
5. The first symptoms are staggering in gait, especially after running, and a tendency to run to one side. In later stages the animal remains in one spot, which it has eaten bare, and continually turns round, its head being the centre of a circle.
6. The Rot is the state of debility and emaciation caused

by the presence of flukes in the liver. The animal acquires a watery eye, with a slight tinge of yellow. Its flesh becomes soft, and finally it emaciates with progressive failure of strength.

7. In the very earliest stage of Rot the mutton is reputed to be improved, being more tender, whilst not losing anything in flavour. At a later stage it is watery and insipid. Its use is always perfectly safe.

No. XCI.—*The Echinococcus-Hydatid.*

1. What is the usual source of the echinococcus-hydatid in man?

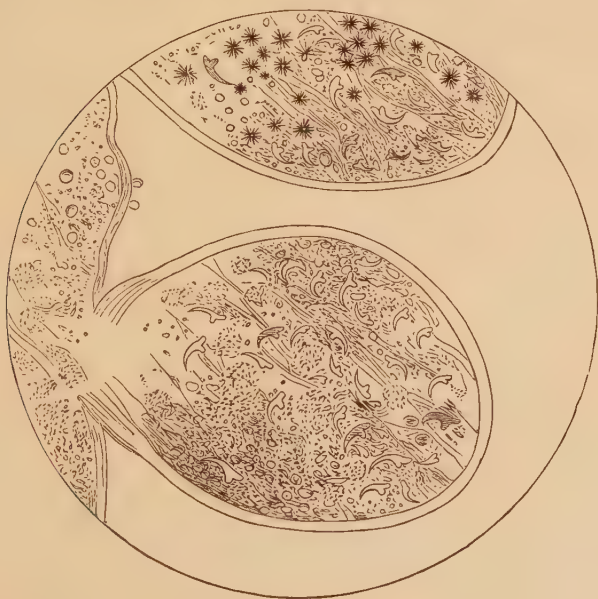
2. In what countries are echinococcus-cysts in man especially common, and how do you explain their prevalence?

3. Which sex suffers most frequently, and how is this difference to be explained?

4. How do dogs obtain the echinococci which in them develop into tape-worms?

5. In what countries are echinococcus-cysts rarely met with?

6. What do you recognize in the appended woodcut?



ANSWERS.

1. The hydatid-cyst (*echinococcus*) in man is due to the patient having swallowed (on raw garden vegetables) the eggs of one of the tape-worms of the dog.

2. They occur in almost all parts of the world, but are especially common in Iceland and Australia (Victoria). Their frequency depends upon the number of dogs kept, and upon the closeness of their domesticity with their owners. If the dogs frequent gardens the ova of their tape-worms may be dropped upon edible vegetables.

3. Wherever statistics have been collected it has been found that the female sex suffers much more frequently than the male. This may be supposed to be due to the fact that women, in their capacity of cooks, have more to do with garden-produce than men, and are more apt to taste, in the raw state, the articles which pass through their hands.

4. The *echinococcus*-hydatid may occur in cattle and sheep as well as in man. It is, in fact, very common in sheep where the dogs have tape-worm. Thus the dogs have abundant opportunities of obtaining in turn the *echinococcus*.

5. They are rare in England, and excessively rare in North America (Osler, quoted by Hirsch).

6. The woodcut shows *echinococci* developed as buds from the lining membrane of the parent cyst. There are abundance of the characteristic hooklets (like crabs' claws) mixed with calcareous crystals and fatty matters. They are dead and decomposed.

No. XCII.—*On Tapeworms*.*

1. How would you distinguish a specimen of *tænia solium* from one of *T. saginata* (*mediocanellata*) ?

2. To which of the worms met with in man is the term "*ver solitaire*" applicable ?

3. Do the segments of a tapeworm, when detached, show any signs of independent life ?

* In most of what I have written on the subject of worms I have had the advantage of consulting the excellent English translation of Leukart's work by Dr. Hoyle, which has been recently brought out, by that enterprising medical publisher Mr. Young Pentland.

4. Is the caution given by a recent author on worms, that the joints of tapeworms should be at once put into strong spirits of wine lest "they should infect the system," based upon scientific knowledge?

5. Can tapeworms breed in the human intestine?

ANSWERS.

1. The latter has no hooklets. Its segments are both broader and thicker than those of solium.

2. To the *tænia solium*, of which it is rare to find more than one. *Tænia saginata*, on the other hand, is often found in companies of three, four, or more.

3. Yes, both within and outside the body they are able to crawl, although wholly without feet. Thus they crawl out at the anus independently of defæcation and produce irritation and disgust. After exit they crawl on grass and vegetables to deposit their eggs.

4. The caution must be supposed to imply a fear that the tapeworms' eggs might get upon the fingers and so into the mouth of the investigator. It is to be remembered, however, that he would not be their appropriate host, and that they would probably die. The ova of *solium* ought to be swallowed by a pig, and those of *mediocanellata* by an ox, in order that the bladder-worm should be produced, which, taken in turn into the human stomach, would produce the tape-worm. The facts at our disposal, however, do not warrant dogmatic security, and those who handle tape-worms will do well to take all precautions.

5. No; they shed their egg-containing joints, and these must be taken by some other animal and in it be developed into a cystic worm.

No. XCIII.—*On Intestinal Worms.*

1. Do intestinal worms constitute a zoological group to themselves?

2. Do they represent any one zoological family?

3. What tapeworms may occur in the intestines of the dog?

4. In what ways are the chief risks of acquiring tapeworm encountered?

5. What regulates the multiplicity or otherwise of tapeworms?

6. What is the duration of life of a tapeworm in man?

ANSWERS.

1. No; they are to be regarded rather as the representatives of other groups which have become modified in structure (degraded) owing to their having adopted a parasitic manner of life.

2. No; they belong to several different families. The cestoids are very different from the ascarides, and both from the flukes. The cestoids and the flukes are, however, related.

3. *Tænia serrata*, *T. cucumerina*, *T. marginata*, *T. cœnurus*, and *T. echinococcus*.

4. All animals which feed on grass or the leaves of vegetables (raw) run the risk of receiving the fæces of other animals. Thus man may on various forms of salad receive the eggs of the *tænia echinococcus* of the dog, and may become the subject of hydatid. The ox, from human fæces, may in like manner receive the ova of *tænia saginata* (*medio-canellata*), and the pig of *tænia solium* (the result being severally "measly beef" or "measly pork). The proglottides of sexually mature joints of tapeworms possess, when evacuated in fæces, some power of motion, and are able to crawl on to grass, &c., and there deposit their eggs.

5. Tapeworms do not increase in number, and the question as to whether one or more be present depends entirely upon the number of scolices swallowed. If several be taken at once, there is no reason why any of the tapeworms should not be found in companies. In the experimental feeding of animals great numbers are produced.

6. It is supposed to live about two years if let alone. After that the host becomes free, unless meanwhile another scolex have been swallowed. Obviously, however, the determination of such a point is beset with difficulties.

PLATE XXXIX.

OCCIPITAL ENCEPHALOCELE.

THIS portrait, which is copied from a drawing given me by Dr. Roddick, of Montreal, shows the head of a child who was the subject of an occipital encephalocele. It may be suitably compared with one which I have published as Plate XLV. in my 'Illustrations of Clinical Surgery.' In my case, in which I removed the tumour very unwillingly, I was fortunate enough to find the canal of communication between the cyst and the meninges quite obliterated, and the patient recovered. Traces of the obliterated canal were, however, easily seen in the pedicle of the tumour, and I had to thank my good fortune for the favourable result. In Dr. Roddick's case the canal was still open, and a fatal result from meningitis followed the operation. The occipital bone, as removed at the autopsy, is shown below. It will be seen that the opening communicating with the skull was separated by a bony ridge from the foramen magnum. In many cases the separation is only by ligament.

A successful case of the removal of a tumour of this kind, very similar to my own, is published in the 'Medico-Chirurgical Transactions' by Mr. Solly. The great point in diagnosis is, of course, to make quite sure that the tumour receives no impulse when the child cries, or otherwise makes a forcible expiration. Unless this can be proved beyond doubt, all operations are very dangerous. Even the strictest antiseptic measures cannot be trusted in these cases.

(This case is briefly mentioned in Trans. Path. Society, vol. xxxi., p. 338).



PLATE XL.

MICROCEPHALUS, WITH BULGING OF THE BRAIN, AND HYDROCEPHALUS.

THIS portrait illustrates a most extraordinary case, in which microcephalus was coincident with the development of chronic hydrocephalus. Such at least is my explanation of the conditions which occurred. The case is recorded in the Trans. Clin. Society, vol. ix., with a supplement at page 359, vol. xxii. I first saw the child in October, 1871, when six months old. Its face was small, eyeballs prominent, and there was a large hemispherical bulging in the middle of the forehead. This had been present at birth. When I saw it, the swelling was hard and covered with bone. The rest of the skull was small. The child was moderately intelligent. Four years later the bone had been to a great extent absorbed, and a large, bulging, soft mass was present. It appeared as if the child's brain was growing through its skull, in consequence of the non-expansion of the latter. Some years later still, the conditions shown in the portrait had been produced. It still appeared as if the skull-bones had been incapable of expansion, and the brain and its meninges had bulged through. The orbits were very shallow, and the eyeballs occasionally became dislocated. A few years later still the child died, in consequence of an operation. I had always resisted the desire of the patient's parents that something should be attempted by the knife, and after I had watched the case for about ten years, a bolder surgeon was consulted. The incisions made at the operation disclosed, I believe, the conditions which I had suspected. The overhanging scalp containing brain matter, and some, but not much, hydrocephalic fluid. No post-mortem was obtained. The case is, so far as my knowledge extends, unique. A discussion upon it will be found in the 'Lancet,' Oct. 30th, 1875.



PLATE XLI.

RECURRED INFLAMMATION IN THE SITES OF CHANCRES.

Fig. 1.—The upper figure in this plate shows the arm of a gentleman who had chancres from vaccination. The appearances exhibited, however, are not those of the chancres themselves, but of conditions which occurred about the scars four years later. They are of interest as examples of recurrence of disease at the site of a former infection. The chancres had in the first instance disappeared quickly under treatment by mercury, and nothing peculiar remained in their scars. After about four years of good health, two of the chancre-scars again inflamed, and the conditions resulted which are shown in this portrait. There was slight redness and thickening. The process was rather slow in development, and suggested the formation of a lupus patch. Under specific treatment internally and locally, all trace of the recurred disease disappeared rapidly and completely. The patient has since enjoyed good health. He is married, and the father of a healthy family. The vaccination was in February of 1871.

The recurrence of disease in the site of chancres which have long ago been cured is, I am sure, not very uncommon, and it illustrates a most important law in reference to the natural history of syphilis. I may add to the above narrative that the father of the young man who was the subject of this case was vaccinated at the same time as his son, and was also infected with syphilis. The vaccination was in 1871, and in 1886, after an interval of sixteen years, one of his vaccination scars became red and ulcerated. For further particulars, see my little work on Syphilis, page 307.

CHANCRE OF THE LIP.

Fig. 2. *Primary chancre of the upper lip.*—About the diagnosis of the formidable appearances here depicted there was not the slightest doubt. It was a primary chancre of unusual dimensions.

PLATE XLI. (*continued*).

The patient was a young lady from a country town, engaged, if I remember rightly, in the management of a post-office. In all probability the sore had been contracted from kissing, but as to any special exposure to risk in this way she would admit nothing. The chancre was attended by a large bubo under the jaw, and by a severe syphilitic eruption. All the symptoms disappeared as usual under treatment. I have seen many chancres on the lips, but I think this worthy of publication on account of the exaggerated swelling and induration which attended it. They were such as might very easily have led to an error in diagnosis. I have never seen a larger chancre on the lip, but I have seen developed in the cheek one at least five times as large as this. It involved almost the whole of a man's cheek in one mass of inflammatory induration. A portrait showing a chancre of unusual size near to the lip will be found in my 'Clinical Illustrations,' Plate LXXXIV.

(SMALLER ATLAS.)

